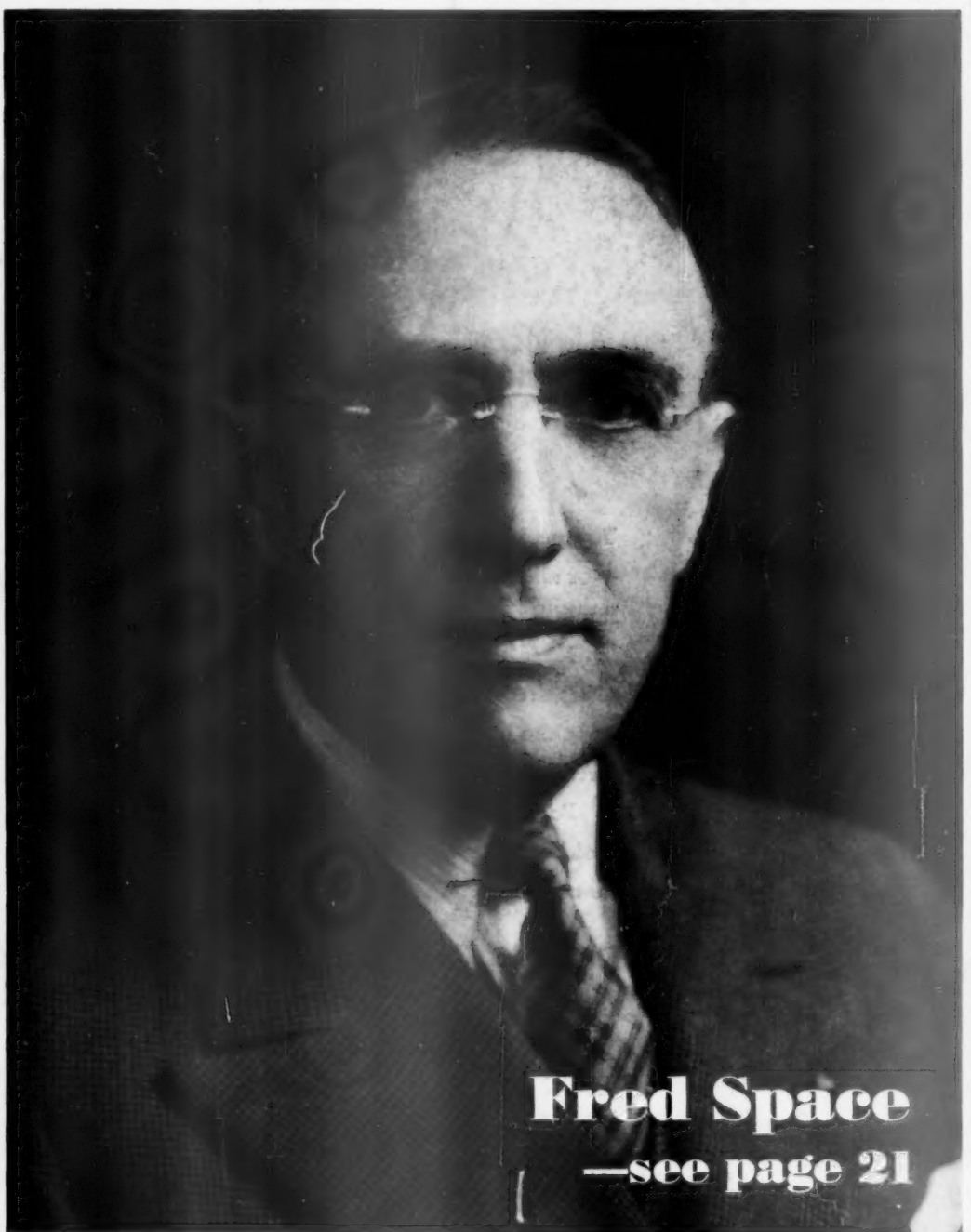


P

FEB 16 1938

PURCHASING

SINCE 1915 • THE NATIONAL MAGAZINE FOR PURCHASING AGENTS



Fred Space
—see page 21

Vol. VI No. 2

FEBRUARY 1938





You may know Republic Steel for its high quality in sheets—or pipe—or alloys—or ENDURO Stainless Steel—but, Mr. Purchasing Agent, Republic produces a wide diversity of steels and steel products.

Republic is the world's largest producer of alloy steels. Republic offers the most complete line of tubular goods of any single producer. Republic has grown rapidly to the point where now it is one of the three largest steel producers in the country.

For quality, dependability and assistance in working out your problems concerning the application of steels, it will be to your advantage to think first of Republic Steel Corporation, Cleveland, Ohio.

REPUBLIC STEEL

**BERGER MANUFACTURING DIVISION • STEEL AND TUBES, INC.
UNION DRAWN STEEL DIVISION • TRUSCON STEEL COMPANY
NILES STEEL PRODUCTS DIVISION**

**PRODUCTS OF STEEL AND TUBES, INC.
THAT YOU SHOULD KNOW ABOUT—
ELECTRUNITE Boiler and Condenser Tubes—ELECTRUNITE Mechanical
and Structural Tubing—ELECTRUNITE ENDURO Stainless Steel Tubing—
ELECTRUNITE Steeltubes Conduit.**

When writing Republic Steel Corp. (or Steel and Tubes, Inc.) for further information, please address Department EP



A STROKE OF LIGHTNING IN A RUBBER HOSE

A typical example of Goodrich improvement in rubber

EVER see a man cleaning the rough spots off metal? He uses a blast of sand, roaring out of a hose nozzle at 85 miles per hour. Efficient for cleaning, but the tiny sand particles built up hundreds of thousands of volts of static electricity in the hose and caused a spark between lining and cover of the hose (actually a tiny stroke of lightning) which punctured the hose, let air pressure escape, ruined the entire length, and often knocked the worker down.

Goodrich engineers set out to overcome this danger and waste. A grounded wire would do it, but a wire

inside the hose was worn out by the blast of sand, wire outside still allowed the destructive spark. Finally Goodrich developed a hose construction with a wire spiraled between the all-rubber hose lining and the outer rubber-and-fabric wall. The spark jumps to the wire through the rubber, but the resilient rubber seals the hole and no damage is done—the spark never penetrates the hose wall. Workmen are no longer knocked down, efficient hose life is multiplied, cost to the user goes down.

This safer, longer-lived product is a typical example of Goodrich research

which is constantly at work to make every Goodrich product—hose, belting, packing and everything else—last longer and serve you better. Every time you buy from a *Goodrich* Distributor you receive all these important improvements which Goodrich research has poured into mechanical rubber goods. The B. F. Goodrich Company, Mechanical Rubber Goods Division, Akron, Ohio.

Goodrich
ALL products problems IN RUBBER

PURCHASING

Established 1916 as "The Purchasing Agent"
Consolidated with "The Executive Purchaser"

PURCHASING is an independent journal, not the official organ of any association. It is the only publication of national scope devoted exclusively to the interests and problems of the purchasing executive in industry and government.

Contents for February

Yours on Request	4, 6
F. O. B.	9
Solutions That Can Not Solve	11
What Constitutes Quality in Leather Belting?	12
Francis A. Westbrook	
How THE PRUDENTIAL Buys	15
Silhouette Studies	21
23: Frederick Grant Space	
The Market Place.	24
Reading the Business Barometers	30
13: Cotton	
Harold A. Knight	
Among the Associations	32
Personalities in the News	36
Obituary	37
N.A.P.A. Convention Committee	38
The World Wears St. Louis Shoes	38
Frank C. Rand	
The Boffey Prize Paper	42
"An Organization Study of 25 Purchasing Departments"	
Joseph D. Yoder, Jr.	
New Products & Ideas	48
Index to Advertisers	55

Published monthly by
BOFFEY PUBLISHING CO., Inc.
11 West 42nd Street, New York, N. Y.
STUART F. HEINRITZ.....Editor
Advertising Representatives
GEO. B. HOWARTH,
11 West 42nd St., New York
H. N. PICKETT,
2843 Hampton Road, Cleveland
STANLEY J. SMITH,
201 North Wells, Chicago
FRED WRIGHT,
Insurance Exchange Bldg., St. Louis

Acceptance under the Act of June 5, 1934, at Easton, Pa., Authorized June 4, 1936

VOLUME VI
NUMBER 2

February 1938

15c A COPY, \$1.00 A YEAR
CANADA AND FOREIGN, \$1.50 A YEAR

PAGE 2

PURCHASING



LONG DISTANCE

PUTS *tact*

INTO *contact*

ALL business can learn a basic lesson from the modern credit man. He relies on Long Distance telephone service for collecting overdue accounts without losing good will.

Your credit man knows that a Long Distance call reaches the right person promptly and gets personal attention . . . that it permits tactful, two-way discussion from which some settlement usually develops.

Sample the service yourself. . . . An old customer who hasn't been heard from for months? A "hot" prospect who has suddenly cooled off? Errors, misunderstandings or complaints? If you can't go see them, telephone and talk things over. Give your personality a chance! You'll find Long Distance smooths things out quickly, clearly . . . and economically.



Yours on Request

Purchasing agents will find it well worth their while to read the publications reviewed on this and the following pages. From among the many submitted to us, they have been selected by the editors as having greatest interest and utility value to purchasing agents.

To obtain copies, simply fill in and mail coupon at the bottom of this page.

258. "The Candid Camera Tells the Story" is the title of an illuminating pamphlet portraying the various steps in the manufacture of Parker-Kalon Socket Screws. In addition to the numerous candid camera shots which accompany the text, the pamphlet features tables showing dimensions, specifications and prices of cold-forged hollow set screws, socket head cap screws, socket head stripper bolts and hex wrenches.

275. The Neenah Portfolio of rag content papers, containing samples of bond, ledger and manifold papers, describes the visible and invisible factors which affect paper quality. Of special interest is the insert entitled "The Letterhead Question—and a few answers," which deals with the various attributes of a good letterhead.

276. The Ryerson Certified Steel Book—a beautifully illustrated 28-page, 11" x 15", spiral plastic bound publication published by Joseph T. Ryerson & Son, Inc.—explains in detail how certified steels solve the problem of obtaining uniform and quality controlled steel for immediate shipment from stock. Of definite value to all users of steel, especially those interested in alloys, this fine book is a definite asset to every purchasing department. It includes specifications for an extensive variety of steels and alloys, in sheets, bars, strip, plates, structural shapes, etc.

279. "Moore's Modern Methods," a 144-page, 10" x 6", book published by the John C. Moore Corp., illustrates standard loose-leaf systems, binders, indexes, cabinets and innumerable stock forms. Among the latter are purchasing agents' records, production cost sheets, employee and social security records, advertising return sheets, follow-up freight claims, quotations given and received, stock on hand, etc. Special ruled and printed forms to fit individual requirements are also available.

280. Numerous actual photographs of bulkbound carload shipments of many diversified products tell the story of "The Signode Tensional Steel Strapping System for Carloading," a booklet published by Signode Steel Strapping Co. Savings in freight costs and shipping materials, reduction of packing time, increased safety in transit are included among the claims made for this system, which is used by many leading manufacturers.

287. One of the interesting features of a new booklet prepared by National Blank Book Co. is the comparison between regular white paper and green-white "Eye-Ease" paper. This booklet describes the many advantages of the new "Eye-Ease" records, which reduce eye-strain and fatigue and promote accuracy.

297. New patented "Speed-Mo" time and date stamps are offered on approval in a pamphlet issued by Rivet-O Mfg. Co. In addition to numerous stock styles (such as Received, Paid, Approved, Filed, etc.) these stamps are available with any special wording desired.

300. Of pertinent interest to purchasing agents is "How to Profit With Air Express," an 8-page pamphlet issued by Railway Express Agency. Specific applications for air and air-rail express are pointed out. A map is included showing air express routes all over the United States. A table of charges give rates to and from leading cities. Another table shows approximate elapsed flying time between these cities.

301. The new "Phillips" recessed head, self-centering screws and bolts are illustrated and described in an attractive colorful pamphlet prepared by the American Screw Co. Scientifically designed, with a tapered recess in place of the slot in the conventional screw, "Phillips" screws provide faster driving, better holding power, better appearance, reduced spoilage, fewer accidents, etc. Available in wood screws, machine screws, stove bolts, sheet metal screws.

302. How to obtain comfortable heat and full value for every fuel dollar through the scientific "alternate method" of firing is explained in "Which End?", an interesting two-color booklet distributed by Appalachian Coals, Inc. Branding smoke as an economic waste, this booklet, with the aid of diagrams, points out how the "alternate method" prevents smoke. While designed expressly for hand-firing of home furnaces and stoves, the instructions in the booklet are applicable for hand-firing commercial and industrial boilers.

303. "Greater Dollar Value," a profusely illustrated 32-page booklet produced by the American Cable Co. contains informative data on how to overcome or minimize such wire rope life-destroying elements as fatigue, uneven spooling, whipping, reverse bending, twisting in sheave grooves, kinking, porcupining, jerking and abrasion. It also gives constructive information to rope users for general industrial purposes, as well as in the oil, lumber, mining, contracting and building fields.

304. "The Art and Science of Grinding," an interesting 48-page booklet issued by Sterling Grinding Wheel Co., features forty questions answered by an expert, in a section titled "What Do You Know About Grinding Wheels?" Other important information includes descriptions of various types of grinding wheels and their applications; recommendations on testing, operating speeds, etc.; metric conversion, wheel circumferences, weights of wheels and numerous other tables.

305. Building business and good will is the theme of the new Howard Paper Co.'s portfolio which contains samples of Howard Bond in white and fourteen brilliant colors. Also included are attractive specimens of letterheads and envelopes in plain, laid, ripple, linen and handmade finishes.

306. Its new Cecostamp forming machine for drop stamping lightweight, high-strength, sheet metal parts is illustrated and described in the Chambersburg Engineering Co.'s Bulletin No. 275.

307. Results of twenty comparative tests conducted with samples from five leading manufacturers provide one of the features of the U. S. Rubber Products new illustrated manual on wire and cable. Entitled "U. S. Royal Cords & Cables," this manual contains data and specifications of value to buyers.

(Additional listings on page 6)

PURCHASING, 11 West 42nd St., New York, N. Y.

I wish to receive the following literature:

Numbers:

Name

Company

Address

City **State**

PAGE 4

PURCHASING



Special wheels for gray iron castings, for steel castings, for malleable castings, for non-ferrous castings—and in different variations for floor stands, swing frame and portable grinders—for high speed or slow speed operation. That's what's available in the Norton line of foundry wheels—plus the advantage of skilled engineers to adapt them to your specific jobs. Is it any wonder that Norton Wheels have grinding costs down to rock bottom for many foundries? We'd like to prove by actual test what they can do for you, too.

NORTON COMPANY, Worcester, Mass.

Yours on Request

Purchasing agents will find it well worth their while to read the publications reviewed on this and the following pages. From among the many submitted to us, they have been selected by the editors as having greatest interest and utility value to purchasing agents.

To obtain copies, simply fill in and mail coupon at the bottom of this page.

308. The new 48-page Billings & Spencer catalog of forged tools presents an extensive line of wrenches for virtually every industrial need. Detailed tables of specifications and prices accompany the illustrations of all items. Besides wrenches, pliers, hammers, vises, clamps, etc., are shown.

309. Replete with actual photographs of heavy hoisting jobs is "How to Handle Loads Safely," a 16-page, 8 1/2" x 11", booklet prepared by MacWhyte Co. The photographs depict typical hoisting operations which are aided by wire rope slings. These slings are available in various load strengths, ranging as high as 300 tons.

310. A paper describing a newly developed process of making high lead bearing bronzes has been printed by Riverside Foundry & Galvanizing Co. It is claimed that this process produces higher quality and uniformity than has ever been attained before.

311. Polymerin, a new industrial finish said to attain the production speed of lacquers and possess the desirable qualities of permanence and durability common to synthetic resin finishes, is the subject of a handsome 12-page, 9" x 12", booklet issued by Ault & Wiborg Corp. Available in all colors, Polymerin provides a suitable finish for washing machines, office equipment, metal furniture, toys, stoves, hospital equipment, plant machinery, electrical, appliances, and other types of metal products.

312. A new high-pressure die-casting machine, offering maximum production at minimum cost, is illustrated and described in a 4-page, 8 1/2" x 11", folder issued by H. L. Harvill, Inc.

313. The "Grinding Wheel Guide," published by American Emery Wheel Works, devotes 20 of its 46 pages to recommendations of grains and grades of abrasives for specific materials and jobs. An interesting feature of this booklet is the section dealing with causes of grinding wheel accidents. Other information includes description of bonding processes, abrasive contents, tables of operating speeds, revolutions per minute, weights of wheels, etc.

314. Fifteen new stock forms for inventory and stock control records are announced in a pamphlet issued by C. E. Sheppard Co. The result of an intensive study of thousands of inventory, purchase and stock records used by large companies, these forms are adaptable to combination purchase-quotation-and-inventory records, raw material control, stock and process control, contract and consignment records.

315. An exceptionally enlightening pamphlet entitled "What Do You Know About Envelopes?", issued by the Outlook Envelope Co., will prove of immeasurable assistance to purchasing agents in determining true value when buying envelopes. All of the elements which enter into the price—namely paper, printing, adhesives, packing—are analyzed in the pamphlet for the guidance of envelope buyers.

316. On the premise that the test of a typewriter is the typewriter itself and the work it does, Royal Typewriter Co. has published "How to Give Royal The Desk Test." This informative booklet, aided by sixteen close-up photo views of individual sections of the typewriter, highlights features which lend to increased typing efficiency and which contribute to maximum typewriter value.

317. To meet new international airmail regulations necessitating new five-gram graduated beam precision scales, the Triner Sales Co. has designed two new scales which are illustrated and described in a catalog supplement sheet just issued. Purchasing agents interested in effecting savings for their export departments on foreign mail through accurate weighing of letters and packages should investigate these new models for use in both domestic and foreign branches.

318. The new sample book of thin papers just announced by Esleek Mfg. Co. contains numerous samples for records, forms, copies, letterheads, advertising, legal documents, air mail, branch office and foreign correspondence. A variety of weights, finishes and colors, in grades ranging from 25% to 100% rag content, are included.

319. An attractive, well illustrated, colorful catalog of 28 pages, 8 1/2" x 11", has been released by Emerson Electric Mfg. Co. Devoted to the 1938 line of electric fans manufactured by this company, the catalog shows a variety of models, covering numerous office and industrial needs. Complete specifications are given.

320. A manual for better filing, indexing, sorting and record control systems, bearing Catalog number 3071, has been published by Yawman and Erbe Mfg. Co. Containing 32 pages, 8 1/2" x 11", and printed in four colors, this publication provides comprehensive descriptions and innumerable illustrations of filing and sorting systems for every conceivable purpose, including direct vision and expanding systems for geographical, alphabetical and subject files. Other filing supplies represented in the catalog include alphabetic, monthly, daily, weekly, state, city, town and county guide sets; tabs; tab guides; folders, etc.

321. The new 96-page, flexible covered, spiral bound Catalog No. 617 announced by Diamond Chain & Mfg. Co., contains valuable information on the use of roller chains for motor drives, machinery and conveyor applications. Included are tables, formulae, selection and installation data, and specifications on roller chains, chain attachments and sprockets.

322. To provide buyers of fractional horse power motors with helpful facts concerning the electrical characteristics and applications of these motors, the Century Electric Co. has published a new 28-page catalog. Three pages of advice on how to select motors, numerous photographs of complete motors and various motor parts and detailed descriptions of motor construction lend much valuable guidance to "P. A's." Among the various types of motors represented are single phase, split phase and polyphase, all of which operate on alternating current, and also direct current motors.

(Additional listings on page 4)

PURCHASING, 11 West 42nd St., New York, N. Y.

I wish to receive the following literature:

Numbers:

.....

Name.....

Company.....

Address.....

City.....State.....

PAGE 6

PURCHASING

FEE

TIME - *for* - ACTION!!

Important Price Changes Ahead

◆

In the short space of five months one of the sharpest price declines in history took place. While the McGill Index of "ALL COMMODITIES" shows the drastic drop of 17%, yet certain specific groups were far more sensitive than others. For example: "Hides and Leather" declined 25%; "Agricultural Products"—25%; "Vegetable Oils"—28%; "Livestock"—34%; "Non-Ferrous Metals"—32%; "Fine Textiles"—35%.

BUT NOW—since mid-December, this declining tendency has slowed up, and at present there are unmistakable signs of stabilization. In other words, inevitable lifting forces are now at work. As commodity prices were extremely sensitive to the recent industrial recession, likewise there will be immediate price strength in response to economic betterment.

With signs of stability appearing, the important question now is, "Which Commodities Will Rise First—and WHEN?"

To answer this question intelligently and dependably we provide our clients with important releases which contain specific buying advices for all important basic commodities.

IF YOU WOULD like a sample copy of one of these releases together with a complete description of our Commodity Service, just write us at the address below and this material will be forwarded at once without cost or obligation.

◆

McGILL COMMODITY SERVICE - *Auburndale, Mass.*

EFFICIENT BUYING IS THE KEY TO PROFITS TODAY

**EVERY IMPORTANT SURVEY* OF INDUSTRIAL
BUYING HABITS HAS CONFIRMED THE OUT-
STANDING AUTHORITY OF THE PURCHASING AGENT
. . . . proving that if you are seeking business from
large-scale industry, you must sell the "P. A."**

That's why it is necessary for you to impress your sales story on purchasing agents regularly. And the most economical, effective and thorough way to reach the purchasing agent is through

**A NATIONAL ADVERTISING CAMPAIGN
VIA ONE SINGLE PUBLICATION**

That one is **PURCHASING**—the only national magazine devoted wholly to the interests of purchasing executives.

PURCHASING can help you sell approximately 8,000 "P. A.'s" for the greatest firms in the country . . . the leaders in every branch of industry.

Through this one medium you can support your salesmen *and your distributors' salesmen* **EVERYWHERE.**

Investigate! Write today for circulation data and advertising rates.

*We'll gladly give you specific references on request.

PURCHASING 11 WEST 42nd ST.
NEW YORK, N. Y.

F. O. B.

(Filosofy of Buying)

WHAT'S THE MATTER with public purchasing? F.O.B. confesses to utter naivete in matters political. He knows only what he reads in the papers. And he was particularly intrigued by the following outline of a purchasing agent's qualifications, as detailed in a recent issue of the Waterbury (Conn.) *Republican*:

ONLY ONE JOB IS ACCEPTABLE TO CROCICCHIA

Wants To Be Purchasing Agent And Gives His Ultimatum

Atty. George J. Crocicchia has announced his willingness to accept the post of purchasing agent in the controllers' office, now held by Atty. Martin J. Dunn. Mr. Crocicchia, who has long been an active Republican worker, pointed out last night that this post is usually held by a lawyer and said it is the only post he would take and would refuse to accept any lower position.

Mr. Crocicchia . . . has practiced law here for 16 years. He was one of the leaders in the reorganization of the Republican party three years ago and was its candidate for state senator from the 15th district that year.

He points out that when many of Italian extraction threatened to leave the party after Mr. Palomba was defeated for town chairman that he used his influence to keep them loyal to the party. He also points out that it is important for the party to give recognition to someone of Italian extraction as the Democratic party has done so in many recent appointments.

Meanwhile, we see by the papers, the Civil Service Personnel Board at Birmingham, in hearings following a recommendation of the Grand Jury, finds concerning Jefferson County Purchasing Agent T. S. Page: "from the evidence that he is a man of good character, is honest and has not been guilty of any fraudulent conduct" but that he "has not performed the duties of purchasing agent for Jefferson County and that he is not qualified to hold that position"; the State Purchasing Department of Ohio is under fire; the charge has been brought in Lansing that a group of Kent County residents have engaged in a \$15-a-week assessment plan from certain merchants "to assure them of special consideration in their bids" for state business; a taxpayer's suit has been brought in Atlanta asking that the books and records of the State Purchasing Office be opened for examination; and at Redwood City, Cal., the San Mateo County purchasing agent engaged in a one-man sit-down strike to retain a job that doesn't exist under a recently enacted county ordinance. ■

WORDS GET RATHER tangled up when buyers are the sellers and sellers are the buyers, so we're not quite sure whether it's a buyers' or a sellers' market. But anyhow, the St. Louis Inform-a-Show was a sellout twenty-four hours after the space diagrams were released, and there's a waiting list of eager customers such as any sales manager would like to see lined up outside his office door.

Says the Old Line Buyer: "When there's no market at all, they generously tell us that it's ours, but as soon as any business reappears the sellers take it right back again."

THE SAMPLE ORDER gyp artists from foreign parts are back with us again, or yet. They ply their trade by "going over the purchasing agent's head" and soon the gullible vice presidents and general managers who sign their order forms find themselves in over their own heads too.

Curious Cuthbert wonders whether the scrap industry's ideal of a stabilized scrap market extends to their buying as well as to their selling operations.

More Things We Never Knew Till Now

That fifteen minutes waiting time in the reception room is an economic waste, but that thirty minutes spent in listening to a sales story of no possible interest is a constructive contribution to business welfare.

That a recession is always due to economic causes, but recovery is the result of personal leadership and genius.

That 83.7% of the purchasing agents' Christmas cigars were back in circulation by January 10th.

That it's good business to write off inventory losses for accounting purposes, but bad business to figure the lower scale in arriving at costs.

That the yardstick of government operation is nothing more or less than the disciplinary ruler that our grade teachers used to crack our knuckles with.

That the up-the-sleeve cards of the New Deal are merely deuces—and pretty tame ones at that.

OUTSTANDING ACHIEVEMENT



RYERSON CERTIFIED STEELS include:

Alloy Steels—Tool Steels
Heat Treated Alloy Steel Bars
Allegheny Stainless Steel
Cold Finished Shafting & Screw Stock
Extra Wide Cold Finished Flats
Strip Steel, Flat Wire, etc.
Beams and Heavy Structural
Channels, Angles, Tees & Zees
Hot Rolled Bars—Hoops and Bands
Plates—Sheets
Rails, Splices, Spikes, Bolts, etc.
Boiler Tubes and Fittings
Welding Rod—Mechanical Tubing
Rivets, Bolts, Nuts, Washers, etc.
Reinforcing Bars
Babbitt Metal & Solder

● It had never been done, and many said it could not be done. But Ryerson, realizing the growing need for better, more uniform steel, began working on the problem.

After many years of planning and preparation, tightening specifications and making inspections more rigid, Ryerson is at last able to give industry "Certified Steel." We are in a position to definitely certify to the uniformity and known high quality of all steel in stock.

The outstanding feature of Ryerson Certified Steels is the special plan on the alloys. Whole heats of alloys in which the chemical elements, grain size, cleanliness rating, etc., fall within a specified narrow range, are selected for Ryerson stocks. These are tested for heat treatment response and the results charted. Complete information is sent with each bar. Thus you know exactly what you are getting and how each bar will respond to heat treatment.

Large and complete stocks of Certified Steel are available for immediate shipment. Write for new illustrated booklet which tells the complete story.

JOSEPH T. RYERSON & SON, Inc. Plants at: Chicago, Milwaukee, St. Louis, Detroit, Cincinnati, Cleveland, Buffalo, Boston, Philadelphia, Jersey City.

RYERSON STEEL-SERVICE

Solutions That Can Not Solve

THE recent series of conferences at Washington, in which big business, little business, bankers, and other special groups of the business community came by invitation to talk things over with the government, are strongly reminiscent of similar rallies that were staged during the Blue Eagle days of 1933 and 1934. There are, however, several important points of difference to be noted in the present situation:

Business comes to the conference table with the background of the most active and profitable year since depression—this despite the nearer memory and the very real problems of the current recession and the disquieting downward course of the business chart in recent weeks.

In 1933, the objective in both wages and prices was upward, providing an element of ready-made compensation or balance. Today those objectives are opposed, calling for a sustained wage level and a general lowering of prices—which is a more difficult trick, however desirable it may be.

In 1933, self-regulation of industry and trade had been adjudged incompetent. Since that time, the NRA type of industrial regulation has also a demonstrated record of utter failure to cope with the basic problem; and the government relief program, which differs from the old formulae only in its magnitude, has served only to alleviate and not to improve the situation. In the long view, the achievements of self-regulation are by far the more impressive.

There is at least one point of striking similarity in the approach to the present deliberations: a consistent disregard for realism or reasonableness in dealing with the factor of price.

There is at least one result that both sets of discussions will have in common. The purchasing agent who tries to do a conscientious job for his company may as well prepare himself now to be branded as an obstructionist, public enemy, or worse. For the purchasing agent is inherently bound to be a realist on the subject of prices. He regards price as having some relation to cost, to the market factors of supply and demand, to the relative efficiency of producing units, and to certain intrinsic values of usefulness or marketability—not as an arbitrary objective.

Wage scales without employment, and price schedules without trade, are pretty hollow achievements. They derive meaning only when the buyer—whether the ultimate user or the purchasing arm of industry—gives them substance by placing the orders that support production.

A buying program depends on (1) the ability to buy, and (2) the willingness to buy. The ability will come whenever the wheels start turning. Willingness is harder to inspire. Willingness is frequently confused with desire, but they are two different qualities; all buyers want to buy, but all are not willing.

Some of the factors that militate against willingness, far more important than high prices, are: uniform prices; prices unrelated to costs; legislation that prevents a natural advantage of location or efficiency to be passed along; protection of inefficiency; deliberate waste or destruction of supplies; and lack of confidence.

As between industries, or between companies, these difficulties can be adjusted. It is done every day when a good salesman and a good purchasing man meet across the desk. But the Washington conference method seems to prefer strict segregation of these vitally interrelated interests. Nobody wins at solitaire. Even Toscanini couldn't produce a symphony by leading one instrument at a time.

STUART F. HEINRITZ, EDITOR

What Constitutes Quality in LEATHER BELTING?

FRANCIS A. WESTBROOK

Consulting Engineer

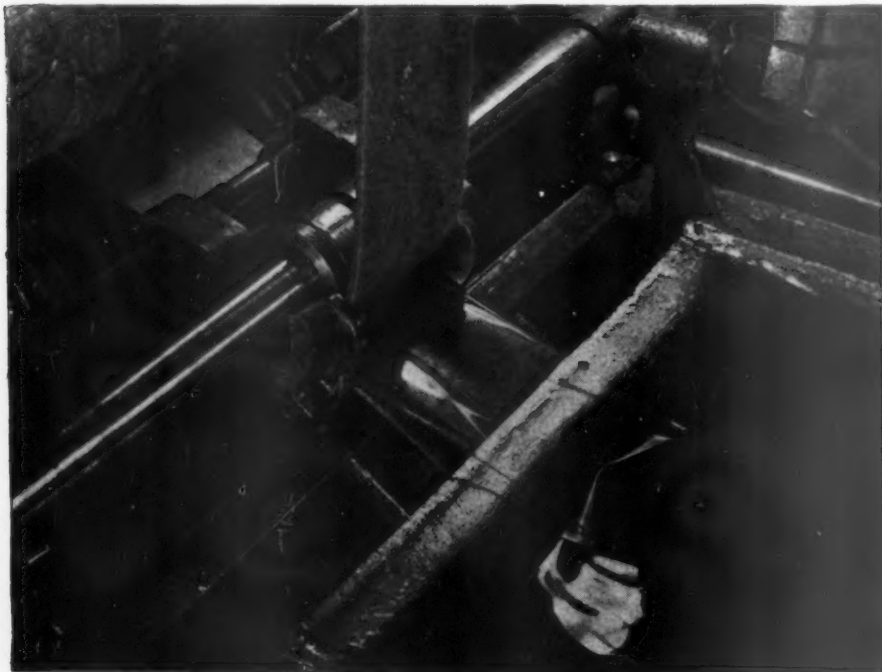
IN CONSIDERING what really constitutes quality in a leather belt for power transmission purposes it will be well to start out with a brief statement of what may be looked upon as the conception of the ideal. This would be a belt of high enough strength to meet all requirements safely; of no thickness—in order to have no bending stresses; of no weight in order to have no centrifugal stresses; completely homogeneous—in order to have no weak spots at the joints or between the plies; almost a positive grip on the pulleys, or in other words, a maximum coefficient of friction; perfect elasticity, i.e., it must have no permanent elongation under continual stress when the belt is traveling around the pulleys. Such a belt could be installed on a drive at very low tension, and since it would never stretch permanently, it would continue to maintain its initially installed tension indefinitely. And since it would have a pulley-gripping ability approaching, but never quite reaching, the grip of a chain, the drive in all practical ways would be positive and yet would have all the desirable features of the flexible system of power transmission.

So far as the practical approach to this ideal conception of a leather belt drive goes, it has been found that it is possible to make leather with a very high degree

of elasticity, and this applies to ordinary oak-tanned leather. Such leather can also have as high a coefficient of friction as any belt, regardless of its tannage. In other words, contrary to popular opinion, there is not necessarily any connection between tannage and coefficient of friction. For all straight-forward power transmission purposes, where extreme flexibility or resistance to heat or chemicals is not required, an ordinary high grade oak-tanned leather belt having a high degree of elasticity, with the maximum possible coefficient of friction, is the kind of quality which will provide the user with the lowest cost power transmission.

Where the pulleys are small in relation to the power requirements of the drive, or where there are a large number of pulleys so that a severe flexing is set up, a very soft belt such as is secured by the very special tannages makes the nearest approach to the ideal. This is the case, however, only so long as the belt has a high degree of elasticity and consequently will not stretch permanently. Such a belt must also have the same high coefficient of friction and, again contrary to popular conception, many of the so-called special-tannage belts on the market do not have as high a coefficient of friction as some of the superior oak-tanned belts. The specially tanned belts of good quality do, nevertheless, have flexibility and are able to withstand the action of heat and chemicals, such as acid and caustic, for a longer time than ordinary oak-tanned leather; and consequently in some cases where these conditions exist, the extra initial investment required to install such belts is justified on the basis of long-time economies.

With respect to the question of double belting, referring again to our ideal belt, it is necessary, of course, to have a strong and uniform bond between the two plies. This is essential in order that the belt may stand up under the most severe flexing conditions to which it may be subjected. Undoubtedly the



Tension cementing results in a strong and uniform bond

finest contribution of the leather belting industry to this perplexing problem was the development of the tension cementing machine, shown in one of the illustrations. This device provides for bonding the plies together so as to secure a maximum of homogeneity, thus producing belts which will give the lowest practicable cost power transmission in the form of continuous trouble-free service.

From the foregoing it will be seen that although the application of belts to power transmission is in many ways a simple matter, it is not economical, or good engineering, to purchase belts without due reference to the characteristics of both the belts and the load. To this end the most up-to-date manufacturers have research departments and testing equipment to aid them in giving their customers the best type of belt to meet their particular conditions. For instance one of the illustrations shows a large dynamometer set, consisting of a 50 h.p. motor-generator, for testing belts with particular reference to elasticity and coefficient of friction under various conditions corresponding to service requirements.

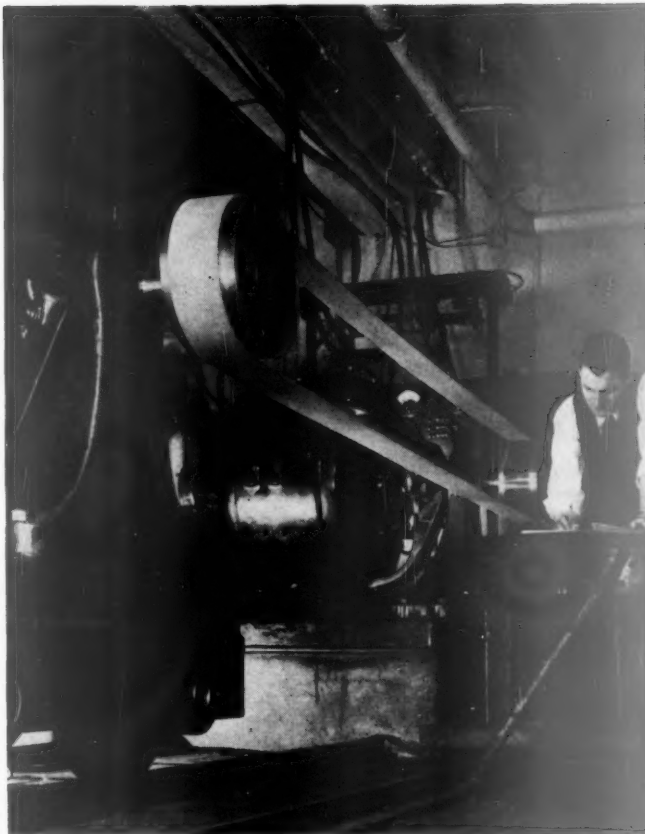
This is important because it is a matter of record that a proper application of belt drives is a means of plant modernization which may be realized at very small cost but which does not seem to be so apparent to industrial management as it might be. One reason for this is that belts will stand a great deal of abuse, such as extreme overloads for comparatively long periods without giving trouble. But actually they are much more expensive than necessary in first cost, upkeep, and upset production schedules, if due regard is not given to such factors as the starting characteristics of the machines, frequency of overloads, type of load, etc.

Thus in determining the requirements for a given drive it is recommended by at least one large belt manufacturer to multiply the h.p. rating of the motor by a service factor for different machines as listed in Table I.

Table I

Machines	Service Factors
Cotton Ginning	1.0 to 1.2
Machine Tools	1.0 to 1.3
Printing	1.0 to 1.3
Metal Mining	1.0 to 1.4
Coal Mining	1.0 to 1.4
Laundry	1.1 to 1.2
Brick and Clay	1.2 to 1.3
Flour and Feed Mill	1.2 to 1.3
Pumps and Compressors	1.2 to 1.3
Woodworking	1.2 to 1.3
Fans and Blowers	1.2 to 1.4
Pulp and Paper	1.2 to 1.4
Rock Crushing	1.2 to 1.4
Oil Field	1.2 to 1.5
Textile	1.2 to 1.5

Use an additional service factor of 1.25 for Reversing Service or Line Start Motors. For High Torque A.C. Motors and Compound Wound D.C. Motors use an additional factor of 1.5



Actual conditions of belt service can be reproduced in test apparatus such as shown above

(Photos by courtesy of Graton & Knight Co.)

These factors give an idea of the importance of considering the service in some detail when purchasing leather belts.

It will be obvious from this discussion that the belting now put on the market to meet the demands of modern high speed machinery and carefully planned production schedules is very much better belting than that made in the past. Engineers and chemists have worked together in research laboratories to develop the product now available. In fact the improvement has been such that one of the best known manufacturers actually guarantees an average machine production increase of 1% to 2% with its new line.

As has already been said, there are on the market certain special kinds of belting for special purposes. The type previously referred to as being designed for resisting the ill effects of heat, acid fumes, steam and other destructive elements, is made of center stock only by a special tanning process, in any width, number of plies and in several thicknesses. When over 4 inches wide it is recommended that double ply be used. This has an exceptionally high coefficient of friction and flexibility which also is advantageous for drives with shifters and cone-step pulleys.

In this connection it may be well to point out that these very soft, flexible belts give plenty of trouble on shifting drives and step-cone drives unless they are straight-running and with the pulleys properly lined up so that no rubbing at the edges takes place. In gen-

eral, with this kind of leather, it is preferable to stick to double belts for almost all applications.

If there is no need of providing protection against steam, fumes, heat, etc. the belt may be made up of one ply of the special leather and one ply of oak-tanned leather, thus providing a very efficient belt for this type of drive at minimum cost. Belting for planers, or other services involving quick reversing, should be of the double, or two-ply type, and not over 8 inches wide. Such belts may be made of the oak-tanned or chrome-tanned leather, or of the special heat and acid resisting leather. Another single ply belt is made especially for extra heavy duty, and a light double belt for use on small pulleys operating at high speeds.

An interesting consideration in connection with belt drives is the effect of their being soaked with oil. There seems to be a wide-spread belief that oil is harmful to leather, particularly oak-tanned leather. At least one progressive manufacturer of this product has made very careful laboratory tests on leather immersed in oil and has failed to prove that the material is damaged. Nevertheless the question, "Why does an oil soaked belt go to pieces so fast?" is reasonable and logical. The answer is equally simple and logical. An oil soaked belt has no transmission capacity because its coefficient of friction has been completely ruined. Such belts must be operated at several times the amount of tension required for a properly maintained belt.

This brings to mind a test run on belts on automatic screw machines which were required to be as tight as boards and which still slipped excessively under peak loads. These belts did not last long, nor would anything else operating under that tension, regardless of whether there was oil or not. That is, slipping and too high tension are injurious to belts of all types, and the presence of oil causes slipping unless the tension is increased—and they are very likely to slip anyway under these conditions.

When the necessary means have been taken to install the right belts for each kind of service in a plant, it is only reasonable to see to it that they are properly maintained in order to keep power transmission costs at the lowest practicable level.

Regular inspections should be made to determine whether the belting is too dry or saturated with oil, too much dressing, etc.; whether it is dirty, or too slack; whether the pulleys are in line; the condition of the laps and lies, and of the lacing where that is used. The best tension at which to operate a belt is that at which it will be as slack as practicable without slipping. As regards the speeds at which it is efficient to operate belts, it may be said in a general way that wear and tear is reduced at the moderately high speeds, which means that pulleys of large enough diameters should be used to secure such speeds. It is also very important to keep the shafting accurately aligned because misalignment causes rapid and unnecessary wear.

Assuming that good belting has been purchased to begin with, ordinary belt troubles are generally traceable to adverse operating conditions which can be con-

Table II

**Belt Troubles
and what causes them**

Ply separation

Belt too thick for the diameter of the pulleys.

○ ○

Leather cracked on the outside—Laps opened up

Belt too thick for the diameter of the pulleys.

○ ○

Outside surface of belt cracked

Belt run at unnecessarily high tension.

○ ○

Short life of leather and cement

Belt too small for the horsepower requirements.

○ ○

Belt burned

One pulley and the belt standing still and the other pulley rotating inside of the belt.

○ ○

Belt torn in two

Belt struck on the edge by some object or some object dropped into it. (It is a fact that a 12" heavy double requires 16,000 lbs. to break it under straight pull and only 200 lbs. to *tear* it. The pulleys would break before the belt would *break* in two.)

○ ○

Pulley surface of belt checked and cracked

Frictional heat created by letting the belt slip.

○ ○

Belt curled and plies opened on edge

Belt run against flange; improperly placed ship-pers, etc.

○ ○

Outside points of laps opened up

Belt running in the wrong direction.

○ ○

Dry rot

Lack of dressing.

○ ○

Oil rot

Exposure to lubricating oil.

○ ○

Leather broken through in the endless lap

Improper cementing of the lap when the belt was installed.

trolled with a little care. Table II lists a number of symptoms that are commonly encountered, together with the probable cause of such conditions.

in a series of case studies outlining the actual organization and procedure in representative purchasing departments.

How THE PRUDENTIAL Buys

Complete centralization of purchasing authority, with separate responsibility for receiving and accounting records, provides a positive check on buying performance in this insurance company

THE PRUDENTIAL Insurance Company of America was founded in 1875. The Company provides gainful employment for approximately 37,000 persons, 26,000 of whom are located in various branch offices throughout the United States and Canada. 11,000 are employed at its Home Office in Newark, New Jersey.

As a mutual company, it operates for the benefit of its twenty-one million policyholders, who share in the Company's earnings, and whose dividends depend on the efficient operation of the business. Its records, methods, and expenditures are constantly subject to examination and the closest sort of scrutiny.

Organization

It is the policy of the Company that all expenditures with the exception of investments, advertising and payroll, shall be made through the Purchasing Department, which is completely centralized at the Home Office, Newark, New Jersey. This department is under the supervision of the Purchasing Agent, who reports directly to the Second Vice President of the Company, and through him to the Executive Vice President and President. All recommendations covering expenditures and contracts over a specified sum are passed upon by the Executive Committee of the Board of Directors. The Purchasing Agent has general supervision over the work of the department, has discretionary authority regarding equipment furnished to branch offices, and does the buying of paper, steel equipment and other furniture, floor coverings, and office machines. He also negotiates major contracts for fuel oil, photo room requirements

and business machine service. He cooperates closely with the Departmental Study Committee which is comprised of a group of specialists who devote their time exclusively to perfecting and improving methods of office procedure. He likewise confers with the Chief Engineer regarding building maintenance, alterations, power plant equipment, etc. The services of Company experts on matters of taxation, patent infringements, legal contract forms and the like are available to the department. But all commercial contacts with vendors, and all commitments, are made through the office of the Purchasing Agent.

There are three Assistant Purchasing Agents, each of whom does the buying of a specified group of materials. It is the custom of the Purchasing Agent to see each salesman on the occasion of his first call; the salesman is then referred to the proper member of the department and subsequent contacts are made directly with the Assistant Purchasing agent handling that particular item.

The Chief Clerk of the Department supervises personnel, certain records of the department and also serves as buyer of commissary supplies, rubber stamps, books and magazines, engraved letterheads and business cards.

Clerks maintain accurate inventory of Home Office and Field me-

chanical equipment in addition to all Field office furniture and furnishings, Company automobiles, service contract details, Canadian printing and the routine work of drawing on unfilled contracts for monthly, quarterly or semi-annual allotments and perform other related duties as assigned.

The total department personnel, including those listed above and their assistants, and the stenographic and filing staff, numbers nineteen.

The Supply Department is maintained separately. It handles all of the Company's printed matter, stationery and advertising novelties, which are requisitioned as needed. Supplies for the Printing Department come under the jurisdiction of the Accounting Department, which issues the requisitions for such material.

The group of specialists (Departmental Study Committee) mentioned above, is an important unit charged with the investigation and tests of new developments and offerings of office equipment and systems. Since such developments frequently entail a revision or adjustment of the existing procedure, the effects of such changes as well as the mechanical points of the new equipment must be carefully studied before a decision or recommendation can be made. In order that every prospective vendor may be given the



J. RAYMOND BOYLE

fullest opportunity to sell the Company and to demonstrate the merit of his equipment, such proposals are generally referred by the Purchasing Department to this committee, and the final decision is based upon a conference in which the heads of the interested departments also participate. Besides these special investigations, the committee engages in a constant study of office systems and related matters.

Personnel

J. Raymond Boyle, Purchasing Agent, has been with The Prudential for thirty years. His experience in the Company has been a varied one, including two years in the Production Department, two years in the Bookkeeping Department, seven years in the Supply Department, and a year of field experience. In 1920 he was appointed Assistant Purchasing Agent, under F. G. Idler. Subsequently, as the department grew, two more Assistant Purchasing Agents were added to the staff. In 1933, when Mr. Idler retired, Mr. Boyle succeeded him as Purchasing

Agent. He is a member of the New York Purchasing Agents Association.

S. W. Toole, Assistant Purchasing Agent, is a graduate of Emory University of Florida. He was formerly associated with the Federal Reserve Bank of Atlanta, and engaged in real estate brokerage at Tampa. He joined the Prudential organization in 1931 as a property inspector in the Mortgage Loan Service Division, and was appointed Assistant Purchasing Agent in 1936. At the present time, in addition to his other duties he supervises all purchases of foodstuffs, and is responsible for the purchase of envelopes, stationery, printing and bindery supplies.

Floyd F. Bragg, Assistant Purchasing Agent, has been with the Company for thirty-one years, of which nineteen have been spent in purchasing work. Prior to this he was in the Supply Department. His purchasing responsibilities include carbon and ribbons, continuous forms, drugs and chemicals, binders, leather goods, uniforms, twine and cord, and furnishings and equipment for branch offices.

William M. Howie, Assistant Purchasing Agent, has been in the department since 1918, and spent three years in the Mechanical Division before that time. He buys supplies for the Home Office Real Estate and Engineering Departments, building maintenance equipment, heavy commissary supplies, and supervises the buying for adjacent Home Office properties.

C. A. Kroeplin, Chief Clerk, makes the purchase of commissary supplies and has other responsibilities as noted above. He has been with the Company for thirty years, more than half of this period being spent in the Purchasing Department.

The entire purchasing staff works closely together. There is a weekly meeting at which the activities of each individual, as well as of the department as a whole, are reviewed; the condition of the commodity markets is analyzed; Home Office problems are discussed; and any major projects that may be under contemplation are talked over so

that the department may be in a position to proceed promptly and intelligently on the purchasing angle.

Requisitions

Requisitions are received from various Home Office Departments, also the Supply, The Engineering and Home Office Real Estate Departments, the Accounting Department (for printing and bindery supplies), and the Commissary Department. The requisition is a three part form. It indicates the material desired, quantity and when wanted. The notation "Order from . . ." indicates the firm from which the last shipment was received. It gives the Purchasing Department a direct reference to the previous purchase, which is naturally convenient and valuable in negotiating the new transaction, but the Purchasing Department has entire freedom in selecting the source of supply. The requisition requires certain necessary approvals. The white original is sent to the Purchasing Department.

The duplicate copy (yellow) goes to the receiving department. This copy does not show either quantity or price. The quantity actually received is entered by the receiving clerk, together with the date, the purchase order number shown on the shipment, and a notation of the transportation charges. This record is then returned to the Accounting Department.

The triplicate copy (blue) is retained by the requisitioning department as a record until the material is received.

There is a special form of daily requisition used by the Commissary Department, listing in printed form the principal items of dairy products, fruit and vegetables, bread and rolls, meat, fish and poultry, so that in most cases only the quantities need to be entered. Most of these supplies are for immediate use. Prices from several sources are noted, the final decision as to purchase however, being placed on quality, service, and price.

All requisitions are numbered consecutively by the issuing department. They come first to the desk

of the Purchasing Agent, who is thus apprised of the nature and the volume of requests for material and is afforded the opportunity of questioning any that seem to be out of order. He assigns the requisitions to the various buyers for attention, retaining those which are to be handled by himself, and referring to the Executive Committee any which may involve expenditures above a stated amount. When the latter are returned with the proper authorization, they follow the regular course.

Purchase Orders

The necessary negotiations are now carried out. From prices on file or submitted on request, it is the policy of the department to secure at least three competitive quotations. All quotations are kept on file for three years as a record to justify the buyers' actions in the event that any question is raised. It is further evidence, also, that personal favoritism or influence has not governed the placing of the orders.

The purchase order itself is issued with five copies—three on regular printed forms, and two on unprinted thin paper in yellow and pink. Purchase orders are numbered consecu-

tively, this sequence having no relation to the requisition numbers.

The original is sent to the vendor, together with a special form of invoice which must be used in billing the material. This invoice is returned directly to the Accounting Department.

The duplicate copy of the purchase order goes from the Purchasing Department to the Accounting Department. To give double assurance in later reconciling this checking copy with other documents relating to the transaction, the Manager of the Accounting Department is required to sign a certification that this carbon copy is an exact duplicate of the original purchase order of that number. When the invoice is received, and the receiving report (duplicate copy of the requisition), the three forms are reconciled in the Accounting Department and must agree in every particular before payment is authorized. Under this complete method of checking, the

basic information regarding the material is independently supplied by the Purchasing Department, Accounting Department, Receiving Department, and the vendor, and there is little chance for error or collusion.

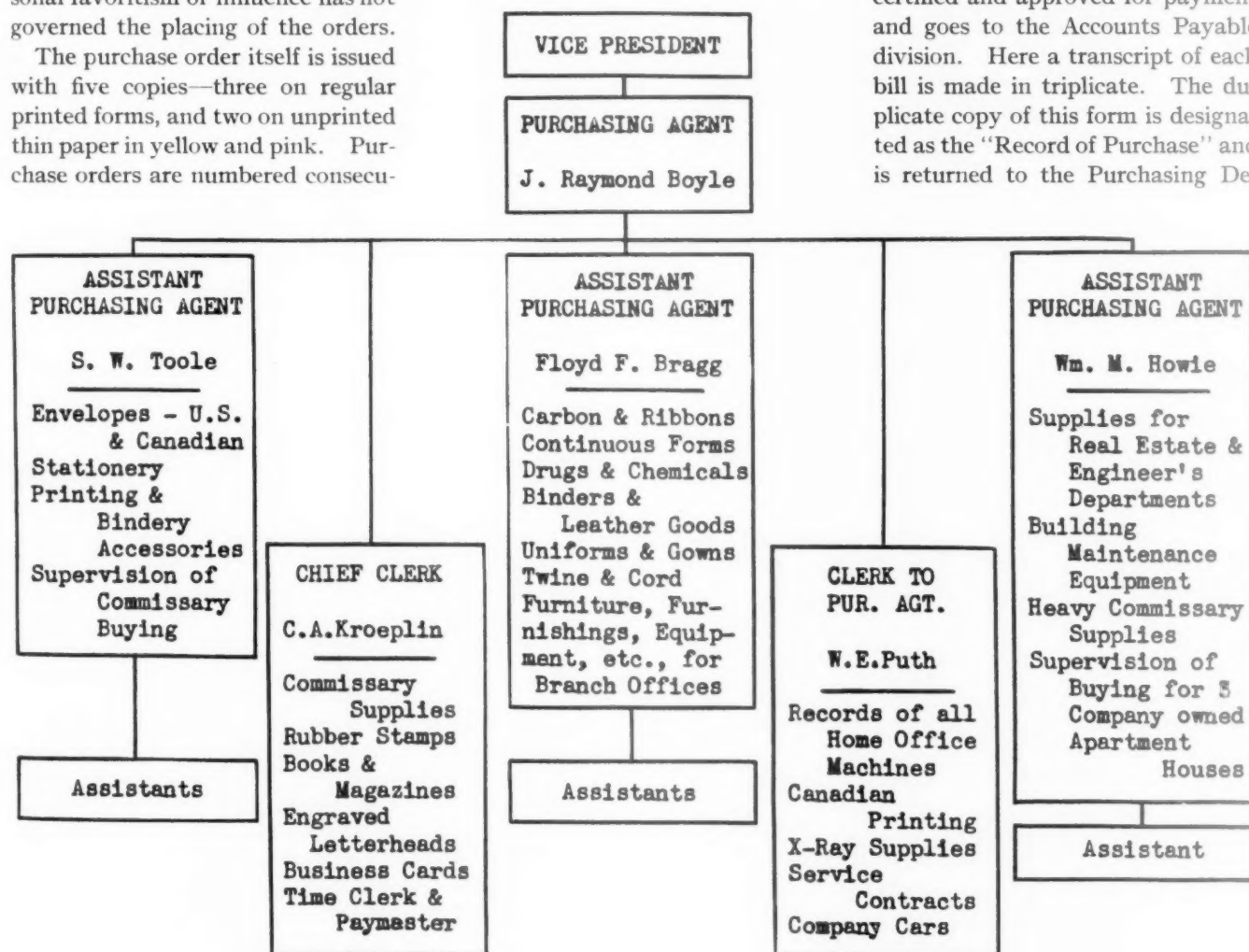
The triplicate copy is retained in the Accounting Department until the order is filled, and is then destroyed.

The pink copy is sent to the originating department as a notice that the material has been ordered.

The yellow thin copy is held in the Purchasing Department until the record of purchase (prepared in the Accounting Department) is received.

It is matched with that record, stamped to show that it has been completed, and is kept for three years in the completed order file.

When the vendor's invoice has been checked in the Accounting Department as noted above, extensions and footings found to be correct and material received in good order, it is certified and approved for payment and goes to the Accounts Payable division. Here a transcript of each bill is made in triplicate. The duplicate copy of this form is designated as the "Record of Purchase" and is returned to the Purchasing De-



partment, where it is filed alphabetically according to the vendor's name and becomes the really vital record of the department, being retained for seven years. It shows a complete record of the transaction—requisition and order numbers, description of material, price; date of bill, terms and F. O. B. point; gross amount of bill, discount, and amount paid, voucher number, and date of payment.

Records

In addition to the record files already mentioned, a commodity index is maintained which gives a compact reference to the materials used by the company. All requisitions are posted to this record before they go into the files.

A very interesting record is maintained in regard to food prices. These products are bought on standard grading, and for each regular item of purchase the weekly range of high and low prices is shown by a vertical line on a chart. Against this information is plotted the record of purchases, showing the date and the price of each commitment made in regular course. A second line gives similar information regarding spot purchases for fill-in or emergency requirements. The result is a graphic portrayal of buying effectiveness. On most items the regular line is kept well within the market range. The spot purchases are consistently higher, and there is every incentive to keep such orders to a minimum.

Daily reports on a number of commodity markets are received in the Purchasing Department, particularly on commissary items, the U. S. Department of Agriculture and the *New York Journal of Commerce* being used as the source of much of this information.

Policies

The inventory policy of the company is rather flexible, but in general a four to six months' supply is provided for in advance. A part of the annual purchase volume is negotiated on contract, usually covering a period of a year, but in the case of the more elaborate mechanical ac-

counting and tabulating machines, contracts may run for a much longer period.

On the majority of office supplies and equipment, it has been found most practicable to establish standards on the basis of manufacturers' items rather than on other forms of quality specification. Such standards are established after exhaustive investigation and tests, and whenever there is a need for a special study, it is referred to the Department Study Committee. The requirements of the Company are large enough in most cases to permit the alternative use of more than one type or make. Competition and security of supply are maintained in this way without sacrifice of uniformity and standardization.

The Company's purchase of paper amounts to a sizeable item due to the fact that it maintains its own Printing Department, where practically all forms relating to the business are produced. Large annual purchases of paper are made of a wide variety of grades and while no rigid specifications are laid down by the Home Office (leading mill brands being generally accepted), the standards are decided by the Purchasing Department in close collaboration with the Printing Department. Outside laboratory tests are made at frequent intervals but after all, having decided on the chemical properties that go for wear and long life, the Printing Department is regarded as the final laboratory test, for it is here that the raw product is converted into applications, policies, office forms by the thousands, and advertising literature. Similarly, outside tests are periodically made of fuel oil and other items bought on contract.

On food products, which are also bought on standard grading, the services of inspectors from the Department of Agriculture are used. The inspectors come unannounced, and have access to all food supplies. They regrade these items independently and place their own inspection stamp on the items. If this grading does not coincide with that of the vendor, an adjustment is in order. Representatives of the Department of Agriculture are also

available on short notice to act as arbitrators in the event that any food delivery is questioned for receipt by the Commissary Department.

At one time, the Purchasing Department made extensive purchases for Company employees, but this policy has been practically discontinued in recent years.

General

There are approximately 12,000 items on the purchasing list of the Prudential. Some 15,000 purchase orders are issued annually.

The principal product groups under which these purchases fall, arranged in the order of dollar volume, is as follows:

- Dining room and kitchen maintenance (including food)
- Paper for the Printing Department's use
- Building expense and maintenance (including buildings used by the company itself and business and apartment properties operated by the company)
- Stationary items (an important factor in this business because the clerical operations correspond to the production schedule of a manufacturing plant)
- Home Office equipment (office machines and furniture)
- Field Office equipment (office machines and furniture)
- Envelopes
- Printing accessories
- Printing machinery
- Miscellaneous outside printing
- Other office expense (X-Ray and medical laboratory supplies, and a very extensive legal library)

A breakdown of the above groups would reveal a highly diversified product list. In the operation of the three large Newark apartments, for example, are required such supplies as refuse cans, electric light bulbs, fuel, paint, and window shades. Cleaning materials constitute a sizable item. There is a large annual expenditure for uniforms for the porters, police, elevator, and commissary employees; boots and coats for gatemen, watchmen, and police; shirts and overalls for painters mechanics and maintenance men.



"There were twenty signatures, all alike: 'Guess who.'"

SILHOUETTE STUDIES

23: Frederick Grant Space

FOR THE MAN WHO meets life eagerly and honestly, who can be a realist without compromising his high standards, who is able to scan the far horizon without losing the beauty of the nearer scene, life's pattern may trace an unexpected course, but over the years it weaves a texture that is rich in lasting satisfactions. Fred Space's work has led him into many different fields, but his progress has been neither hesitant nor inconsistent. A small town boy with an inborn love of the outdoors, he early realized his boyhood ambition of becoming a railroad man—just long enough to rate a pass to New York, where he was promptly swept into the busy whirl of metropolitan activities. He turned from educational work to trade, and had a record of demonstrated ability in both of these diverse undertakings before he had reached his twenty-fifth birthday. He satisfied his innate love of the soil by acquiring his own modest farm and a fine team of horses. A man of peace, he was drawn back into the industrial world by the urgency of wartime manufacture.

Because he is a thoroughly competent executive, business has claimed his services ever since. Because he is inherently a useful and social-minded citizen, he has found new interests and opportunities for service. Because of an engaging talent for straightforward thought and expression, he is widely recognized and respected as one of the better exponents of the purchasing craft, inspiring his colleagues with the significance of their task and interpreting the buyer's job to others in the business community.

Space has been purchasing for more than twenty years. He is excellently equipped for the work. He has an alert and inquiring mind, a diversity of experience, and a

passion for thoroughness; he has a sound sense of values, and a conscientious regard for the responsibility of spending other people's money; he has the ability to deal with men on a frank and friendly basis, and a poker face. While it is perhaps natural that he should find himself in purchasing work, the course of his life might have led in a number of other directions and gone as far. For always, and above all, Fred Space is himself.

It may be that he wonders, sometimes, what might have happened if he had followed that urge to travel and to seek adventure in far places off the beaten track, which through force of circumstance he has satisfied on a more conventional scale. But in that wondering there can be little cause for regret, for he has seen each step of the way clearly, and has taken it with purposeful enthusiasm. If it could all be done over again, it is probable that the story would be much the same. And that in itself is a high indication of sincerity and success.

FRED SPACE WAS BORN August 4th, 1886, in the railroad town of Port Jervis, where the States of New York, New Jersey, and Pennsylvania meet. The Space family was of old New Jersey stock. On his mother's side the line goes back directly to John and Priscilla Alden of the Plymouth Colony, with a strong dash of Welsh influence deriving from Thomas Blatchley, who came from Wales on the good ship *Hopewell* and landed at Guilford, Connecticut, about 1630. His grandparents had a farm in Broome County, New York, and the summers spent there in his boyhood helped to instill in him a genuine love of nature, which still persists.

Fred was the youngest of four children. His father was a railroad man, and a near-fatal, crippling accident before Fred was born

predestined the child for early enlistment in the ranks of the breadwinners. Perhaps it was the consciousness of this situation that led him, even in youth, to develop a philosophy that sought not only a living but a way of life.

He managed to get through the better part of a high school course by devoting every spare minute, early and late, to the care of a local physician's office and horse. The doctor, an unusual man in many respects, took more than the ordinary employer's interest in his young helper. In an unobtrusive way he managed to impart a measure of his own humanitarian ideals, his progressive scientific spirit, his love of growing things, and his insistence on careful attention to detail. Some of those lessons are still vivid today, such as the occasion when Fred found his name traced in the dust film on the polished mahogany of an X-Ray cabinet.

When the time came to seek a full-time job, Space naturally shared the ambition of every Port Jervis youth to find a place on the Erie Railroad. But first there came an interval in which he learned the rudiments of business practice as clerk, stenographer, and cashier in a local lumber yard and a hardware store. At eighteen, he landed a position as bookkeeper in the railroad's Divisional Stores Department. It was a reasonably good opening; for some one else it might have been a career.

BUT WITHIN A FEW months there came the first of several turning points in his life. At the suggestion of a friend who was working in New York, he made a week-end trip to the city, and there he met Burt B. Farnsworth, Educational Director of the 23rd Street Y.M.C.A. The two were immediately attracted to one another. Farnsworth asked the youngster to stay as his assis-

tant, and in the months of close association that followed he proved to be not only a considerate employer, but "guide, counsellor and friend."

After a brief probationary period, Space, at the age of nineteen, was established as Associate Educational Director of a vigorous and growing institution with an enrollment of more than a thousand in its evening classes. He was assisting in organizing courses in salesmanship, advertising, and other business and vocational subjects, lining up busy executives as teachers and lecturers, and going out into industrial plants himself to give noon-hour educational talks on the lives of famous men while the workers sat around eating lunch.

More important, perhaps, than the actual experience, was the new situation in which he found himself. He was away from home, working wholly on his own responsibility and judged entirely on his own work. He was no longer merely Fred, the local boy, whose father had been on the railroad before him, but "Mr. Space," the Associate Director, charged with serious responsibilities and undertaking projects that he would not have dreamed of only a few short months before. His record could be whatever he might make it. The advantages of the large city were all around him. He was learning to meet people and to deal with people, to express himself, to plan things and carry them through.

For four years he continued in this work, enjoying it thoroughly and steadily developing his own talents in the process of training others. During one of his summer vacations he hiked the length of the beautiful Shenandoah Valley in Virginia, an experience which became the subject of some of his informal talks and of his first published article. There came an opportunity to go to Hawaii to direct a similar educational project there. But while he was considering this very attractive proposal, another influence changed the course of his career.

Twice a year, the Y held open house. Among the guests at one of these affairs were two charming sisters from Mt. Vernon, N. Y., and Fred's travel ambitions promptly veered from Honolulu to that suburban city in Westchester. In 1909 he married Miss Hazel Van Namee and established a home in Mt. Vernon. Since that day, his life has been a most delightful and successful partnership.

FAMILY TIES PRESENTLY became business ties as well. A buyer was needed in the Van Namee Dry Goods Company, and young Space gave up his educational work to tackle the job. He found it a fascinating assignment, dealing with a wide variety of general merchandise, introducing him to the teeming wholesale markets of the city, and calling for the exercise of keen judgment and business sense.

Once again, this might have marked the beginning of a new and permanent career, but when a friend came with the proposal that they should jointly operate a 475-acre farm near Sussex, N. J., the call of the good earth revived long dormant yearnings, and a life in trade seemed narrow by comparison. The little family went into conference and decided to pull up stakes, leaving the comparative ease and security of an established business connection after two years, to embark on the new venture.

It was mid-winter, and that chapter seemed to be ill-starred from the very outset when half their furniture was deposited in the snow to lighten the load, so that the moving van might complete the last mile of the trip over drifted roads. Then before the end of the year, his associate was forced to abandon the project. It was too big a proposition to handle alone, but even that brief and somewhat unfortunate experience had demonstrated that his judgment was sound on the basic issue and that this had the elements of a satisfying way of life for him. He was able to liquidate at no great loss, and acquired a smaller farm of about forty acres near Shelton, Conn.,

which became home for Fred and his growing family, for the next nine years.

For two of these years he operated the farm himself. Then as wartime activity came to America, there came another of those turning points that have changed the whole direction of his life. The old Driggs-Seabury Gun Shop in the neighboring city of Derby was revived by the influx of new capital and started to work on Navy contracts as the General Ordnance Company. Space watched the development with interest. His keen, practical mind recognized the commercial opportunity that was unfolding. More than this, he recognized it as his own potential opportunity to be of some personal service in the national emergency, since family responsibilities made enlistment impossible. With his experience, and the growing urgency of manufacture, it seemed to be a natural tie-up. By November, business was brisk at the factory and slack on the farm, and he decided to go down and investigate the possibility of making a business connection.

His interview was anything but satisfactory. He was given no opportunity to present his record. A supercilious office manager made the curt proposal: "Twelve-dollars-a-week-take-it-or-leave-it," and turned a deaf ear to any further discussion of the matter. With pardonable self-respect, Fred decided to leave it. As he went from the office the manager remarked, with careless insolence, that the job would be there if he cared to return in the morning. Neither of them had any thought but that the incident was definitely and permanently closed.

PURCHASING NEARLY LOST a good man on that November afternoon as Space turned back to his friendly acres. But when the day's experience was reviewed in the sympathetic quiet of the evening, his attitude changed. Not that his earlier resentment was unwarranted or unworthy. But there is something in living close to nature that makes for straight thinking and a

clear perspective. Reasoning upon the situation, he came to the conclusion that his appraisal of the opportunity was correct and that his confidence in his own ability was well-founded. Under those circumstances, the detail of a starting wage was relatively unimportant. He went back to Derby in the morning and reported for work.

That decision was swiftly vindicated. Eight months later, Space had won the complete confidence of the management and was assigned to the position of purchasing agent. He spent a week with the purchasing agent of the New London Ship & Engine Company to master the intricacies of buying against government contracts and then took over the entire responsibility of the job.

For the duration of the War, the company worked and prospered at the essential task of developing and manufacturing naval ordnance for use in anti-submarine warfare. Its record of service in the general program was such as to earn the personal commendation of the Secretary of the Navy.

The end of hostilities naturally brought an end to that particular market, but no one regretted that fact. With a well equipped plant and a healthy treasury, the management decided literally to beat their swords into plowshares. General Ordnance bought the National Tractor Company of Cedar Rapids, Iowa, thereby acquiring certain manufacturing rights, and presently they were just as busy in the peaceful activity of producing G-O tractors for export and domestic use.

Space was purchasing agent for both plants, and for the next two years had his fill of travel as he commuted between New England and the middle west, helping to keep the tractors rolling off the end of the assembly line and into the furrows of a world rebuilding.

Then, abruptly, export business simply ceased to exist, and agricultural demand also dried up. The factories were crammed with G-O tractors that had no place to go, and the company was even

obliged to rent vacant land nearby and store the unsold equipment in the open. The debacle was swift and complete. The resources that had grown from wartime profits were dissipated more quickly than they had been built up. In June of 1921, the doors were closed and locked for the last time, and Fred Space was one of three employees who stayed through until the end.

KNOWN BY THIS TIME as an able and experienced buyer, he did not have to wait long before joining the Seymour Manufacturing Company as its purchasing agent, thereby commencing the business relationship which spans more than half of his business life and with which he is inseparably identified in the minds of most purchasing men. In buying circles, Space and Seymour are synonymous. That is more than a casual association of ideas, for the man and his company have much in common. Particularly they share that basic integrity of purpose and performance that is the foundation of real character, whether in a man or a corporation. Space is proud of his company. The company in turn has shown its confidence by entrusting him with a constantly widening responsibility which now includes the supervision of purchases and traffic for the parent organization and its affiliates, the H. A. Matthews Mfg. Co., Seymour Products Co., Mullite Refractories Co., and Rufert Chemical Division.

It must have been apparent as long ago as 1921 that this was to be an enduring relationship, for at that time he gave up the farm that was both a home and a symbol, and moved into town. His new home is a comfortable and unassuming cottage, clinging to a hillside high above the valley, flooded with sunshine, and commanding a far view of the hills beyond. There is an extensive garden where he can get his fingers into the dirt and maintain that contact with growing things that has always meant so much to him.

Continued on page 46



VISIBLE BINDER with Automatic Shift-Control by **NATIONAL**

FOR large installations
(up to 700 accounts per binder or for large sheet sizes) where there is much posting and frequent changing of sheets.

FLAT writing surface....
Large sheet capacity
units.....Speedy shift by
automatic lever.

FEATURES - Precision -
machine built.....Steel
back, fibre sheathed....
Metal hinges.....Stanite
sides.....Label holder.....
Metal rims.....

ASK YOUR STATIONER

NATIONAL BLANK BOOK CO.
HOLYOKE, MASSACHUSETTS
Chicago - 328 S. Jefferson St.
N.Y. - 100 Sixth Ave. Boston - 45 Franklin St.

THE MARKET PLACE



*A quick review of the market
noting major developments in
supply, demand and prices of
selected basic commodities*

Supply

Demand

Market

BURLAP

THE LIBERAL STOCKS of burlap accumulated during the last half of 1937 contributed toward making an unusually sluggish market. Producing interests at Calcutta are reported as negotiating for possible curtailment of operations, but with no definite agreement in sight.

THERE WAS LITTLE ACTIVE buying interest until the last week of January when several good sized orders were placed and local trade was more brisk than for several months past. Buying later subsided, but not quite to previous levels of inactivity.

CALCUTTA PRICES WERE consistently firmer and advancing throughout January. This was not reflected in local quotations until about the 10th. A second advance in the last week of the month brought the net gain up to 10 and 15 points for the entire list.

COAL

IMMEDIATELY FOLLOWING THE effective date of minimum coal prices, bituminous production dropped from 8 3/4 million tons to 6 million tons per week. While there was some recovery from this low rate of output through January, the level did not go above 7 1/4 million tons and there was little evidence of an immediate improvement. Consumers' stocks are high, supplies on hand at manufacturing plants being estimated at more than 45 million tons.

THE COMBINATION OF LOWER industrial activity and high stock piles resulted in drastically cut demand. Particularly hampering to the mines is the fact that slack is not moving in any appreciable quantity, thereby curtailing effective mine capacity for the production of prepared domestic sizes of bituminous, for which a premium market exists.



CURRENT PRICE SCHEDULES are of course at the minimums set by the Bituminous Coal Commission, though the greater part of the coal actually going into industrial use today was bought at lower figures. The schedule has been challenged, leading appeals being those of the Carter Coal Co., the Indiana Gas & Chemical Co., and the Association of American Railroads. Objections in general are not aimed at the Act itself, but at prices set arbitrarily without complete hearings, and said to be discriminatory.

COTTON

COPPER STATISTICS ISSUED in January revealed a sharp increase in stocks. U. S. stocks were up 38 thousand tons (as against estimates of a 30 thousand ton rise) while European stocks, which had been declining for several months, surprisingly added another 19 1/2 thousand tons to the world total. Curtailment of domestic production is to be in full force by February 1.

JANUARY SALES OF COPPER in the U. S. came to about 25,500 tons, down slightly from the December tonnage. Trade was reasonably brisk during the first half month, in an advancing market, but the appearance of the December statistics quenched the enthusiasm of buyers, and the second half was notably slow.

AT THE BEGINNING of the year a dual price structure prevailed, with a quotation of 10 1/8 cents by custom smelters and 11 cents by primary producers. The lower price advanced by 1/8 and 1/4 cents to a level of 10 7/8 at mid-month. In the general decline which followed, a uniform price of 10 cents by custom smelters and producers alike was reached, the lowest figure in more than a year.

COPPER

CARRYOVER OF 9 1/2 TO 11 million bales from the record crop of 1937 is now indicated, as compared with less than 4 1/2 million bales last year. Under these circumstances, sharp limitation of acreage is proposed, looking toward a 1938 crop of about 10 1/2 million bales, with the additional possibility of marketing quotas.

TRADE IN COTTON GOODS improved in January, sales of gray goods being equivalent to 110% of the month's production. Most of the business was done in the second week, but the demand thus established supported increased production schedules over the balance of the month. Combed goods and sheeting were particularly active.

COTTON PRICES, BOTH SPOT and futures, were strong for the first half of the month, reaching new highs for the present movement. Spot cotton went from 8.23 to 8.72 in this period. There was a reaction in the third week, intensified by professional liquidation, but at the close of the month a firm tone was again evident.

OFFICE SUPPLIES & EQUIPMENT

PASTE & MUCILAGE

Write for samples of our inexpensive desk jars, and get our low prices on ADHESIVES before you buy elsewhere.

We have been supplying institutions, government departments and large business organizations for more than 50 years.

Address Package Dept.

THE ARABOL MFG. CO.
110 EAST 42nd ST. NEW YORK

The Varick Press, Inc. 39 W. 19th St. N. Y. CHLSEA 2-7822

ENVELOPES
6" x 9" 1000 PER \$1.25
6" x 9" 1000 PER \$1.00
LETTER 150 PER \$1.50
HEADS 1000 PER \$1.00

All prices quoted F. O. B. New York

Write for estimates on all other printing needs We ship anywhere in U. S. A.

In the type-writer "tough spots" you'll usually find the sensational new *Super-speed* LC SMITH

The Original—**OUTLOOK ENVELOPES**
ESTABLISHED 1902
—The Standard

Glassine or Cellophane Transparency
A Size and Style for Every Purpose
WRITE FOR PRICES AND SAMPLES
Outlook Envelope Co.
1003 W. Washington St. Chicago, Ill.

TEST the new improved

SPEED-MO
STAMP PADS
WRITE FOR
FREE 60-Day Samples
ADOPTED BY LEADING FIRMS AFTER EXHAUSTIVE TESTS. Sweat proof; dust proof; outlive any 5 others; prolong life of rubber stamps.
RIVET-O MFG. CO. 10 Maurice St., Orange, Mass.

MOORE'S LOOSE LEAF Binders and Record Forms

will keep your records more conveniently, more economically. Used by over 300,000 leading firms. Write for free 140-page book showing sample record forms for all kinds of business.

JOHN C. MOORE CORP.
6210 Stone St. Rochester, N. Y.

Columbia
D. Smith

NON-STICK
An Entirely New and Different Pen and Pencil

CARBON PAPER

Will not stick, "tack," smudge nor blue. Outstanding advantages: Greater Wear... Clearer impressions... Deeper, more brilliant colors... Blue and Purple.

COLUMBIA RIBBON & CARBON MFG. CO., INC.
Main Office and Factory: Glen Cove, L. I., N. Y.

USE TEMPO STENCILS for BETTER COPIES

SAMPLES FREE—Send name of your duplicator: Mimeograph, Tempograph, Rotospeed, Neostyle, Lettergraph, Speed-O-Print and all other standard machines.
MILO HARDING CO. LTD.
Manufacturers Tempo Duplicators, Stencils, Ink, etc.
605 Commonwealth Annex, Pittsburgh, Pa.

New - PORTABLE PROTEX ELECTRIC CHECK SIGNER

3 MODELS MODESTLY PRICED... 1938
A \$97.50 B \$107.50 C \$127.50
NO PUSH OR PULL FULLY AUTOMATIC
FOR EXCLUSIVE AGENCY IN YOUR CITY WRITE
CHECK WRITER CO., INC. 169 WILLIAM ST. NEW YORK 11
In replying please mention PURCHASING

The **HANDIEST AND CLEVEREST** DEVICE FOR PULLING OUT STAPLES

The ACE STAPLE REMOVER

This device removes, by slight pressure of the fingers, clinched staples neatly and quickly. It saves the paper as well as the finger nails. A unique feature of the handy ACE Staple Remover is that the withdrawn staples are held firmly on the remover. There is absolutely no danger that flying staples strike the operator in the face. Made of the finest select steel, hardened, chromium plated, the ACE Staple Remover will give many years of satisfactory service. Price 60 cents.

Made by Ace Fastener Corporation, Chicago

SOLD BY ALL GOOD OFFICE SUPPLY DEALERS

PRINTING

Compare! Send for our real money-saving price list.

DAVID NICHOLS CO.
Box 84 Rockmart, Georgia

Investigate, Mr. "P.A."!

For "top" value in office supplies and equipment, send your inquiries to the advertisers on this page and page 27 . . . or ask your local dealer to show you their products.

IRON and STEEL

THE RATE OF STEEL production improved materially in January, but failed to establish a 30% average as predicted. From 19.2%, the five-year low recorded in the closing week of 1937, operations went in successive weeks to 25.6, 27.8, 29.8, and 32.7, then slipped back to 30.5 at the turn of the month. Consumers' inventories are still relatively high, and producers as well as purchasers are following a very cautious course.

STEEL PURCHASING IN JANUARY was about 15% ahead of December, the pick-up being disappointingly slow. Small orders, and deferred purchases wherever possible, were the rule. With the exception of Buick and Ford, the automobile industry was practically out of the market, and shipbuilding was the most active customer, with several large orders providing a fair backlog. In general, the heavy items were in better demand than light steel.

THERE WAS LITTLE PRESSURE within the industry or among consumers to disturb the prevailing price schedule. There were some downward adjustments on sheet prices in the jobbing trade. The scrap market, leading barometer of the industry, was stagnant, and the Institute of Scrap Iron and Steel, in convention at Atlantic City, is on record to promote more stable price conditions in this market, correlated with the finished steel schedule.

LUMBER

MILL STOCKS OF LUMBER that were accumulated in the slack second half of 1937 were reduced considerably last month as shipments improved and output was held well below the 40% level. Softwood producers are ready to step up operations if the present volume of new business is sustained. In hardwoods, however, even the low current output is far in excess of orders.

THE WEEKLY RECORD of shipments and new orders in the softwood field was steadily upward during January, with shipments running 21% and orders 37% ahead of current output. Hardwoods, on the other hand, showed shipments 46% and new orders 52% below production.

IN SPITE OF A MORE favorable statistical position, softwood prices were off during January. Southern pine dropped from 20.76 to 19.72, which is slightly under the 1937 low. Hardwood prices, after an improvement in the last two months of 1937, dropped sharply. Oak flooring went from 86.25 to 84.00 in the opening week and was down to 78.00 before the end of the month.

NAVAL STORES

SUPPLIES OF NAVAL STORES, while relatively heavy as compared to present demand, were substantially reduced during 1937. The year-end figures show turpentine stocks at 68,474, barrels, down 32% from January, 1937, and rosin stocks at 156,874, down 14½% in the same period. Receipts are seasonally lower, and any marked improvement in demand would present a brighter statistical picture. There is still no definite word on progress of the conservation campaign.



DEMAND, OR THE LACK OF IT, remains the chronic weakness of the naval stores situation. Export trade, following a brief spurt at the year-end subsided again in January. Domestic trade is light, and was kept alive by dealer interest in anticipation of a buying movement which failed to develop during the month.

APPARENTLY FOLLOWING THE influence of security markets rather than any specific trade factors, naval stores prices advanced steadily through the first three weeks. Turpentine registered almost a daily increase of ¼ to ¾ of a cent, and went from 30 to 35¾. Rosins meanwhile advanced 40 cents for the finer grades, 30 to 60 cents on medium grades, and 85 cents to \$1.05 on common grades. The reaction was more abrupt. Rosins lost about half their gains, and turpentine ended the month exactly where it started.

PAPER

THE PRODUCTION INDEX OF PAPER reversed its nine-month downward course in January, after touching the low point of 47% at the turn of the year, and climbed back to 62.6%, or slightly higher than the November average. In paperboard, a similar recovery was noted, carrying the figure up to 58%, also just above the November average. Production of Canadian newsprint was drastically curtailed, as consumers' stocks, accumulated prior to the \$7.50 increase on January 1st, are estimated as a three months' supply, with a resultant lag in current purchases.

ASIDE FROM THE SPECIAL situation in newsprint, actuated by the price advance, demand for paper continues generally light but definitely improving. There was a lull immediately after the holiday period, but about the middle of January a steady increase in demand has been felt in virtually all lines, and the trend is toward higher levels.

PAPER PRICES HAVE BEEN well maintained at December levels and are reasonably firm. Chemical pulp is down about 15% from the last quarter of 1937, and though the market shows no particular strength at the new level, it has held steady for the most part, with slight shading on dark foreign pulp during the month. New domestic rags of the better grade commanded higher prices during January.

OFFICE SUPPLIES & EQUIPMENT



PANAMA & BEAVER
Carbons
Ribbons
Duplicator Inks

Ask your PANAMA or BEAVER man "For office records whose legibility is unaffected by time."

MANIFOLD SUPPLIES CO.
188 Third Avenue Brooklyn, N. Y.

SELL YOUR USED EQUIPMENT

We are in the market for Bookkeeping, Calculating, Typewriting, Adding, Addressing, Dictating and Duplicating Machines. Good prices.

INTERNATIONAL OFFICE APPLIANCES
328 Broadway New York, N. Y.
Cable Address: ADDBOOKAL

THE GENERAL MANIFOLD & PRINTING COMPANY

Carbonized office and factory forms of every description: Manifold Books, Duplicating Pay Envelopes, Teletype Rolls, Scale Tickets, Typewriter, Pencil and Hectograph Carbon Papers, etc.

FRANKLIN, PA.

ARE WE ON YOUR
LIST OF SUPPLIERS
for
Loose-Leaf
BINDERS
INDEXES
and FORMS?

Send for Complete Catalog
THE C. E. SHEPPARD CO.
4401 21st Street
Long Island City, N. Y.



MILLER LINE CARBON PAPER

Made in a complete variety of grades, weights and finishes, in all standard colors, and sizes.

MILLER LINE INKED RIBBONS

Made regularly in all standard colors and standard color combinations, record or copying, in seven degrees of inkings

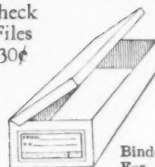
MILLER LINE STENCIL INKS

Made for Rotary Duplicating Machines—open drum, closed drum, fountain feed, portable.

MILLER-BRYANT-PIERCE CO.
AURORA, ILLINOIS

Direct Branch Service Everywhere

Check
Files
30¢



LETTER FILES 56¢

Eliminate bundled records. Use storage files priced low enough to include ALL your inactive records. Drawer and non-drawer file boxes and binders in any size or quantity.

Binders, as low as \$2.00 per dozen.

For complete list, write direct to

C. F. KAPPES, 63 S. 15th St., Pittsburgh, Pa.

THE Aristocrat OF HAND-FEED PENCIL SHARPENERS



THE
DEXTER
No. 2

A double-bearing model incorporating every improvement

\$5.00

Sold by your Office Supply House

ROUND-CORNERING IS STREAMLINING

Prevents Dog-Ears—Enhances Appearance—Increases Life—Cuts Down Replacement Costs of Visible Records, Loose-Leaf Sheets, Sales Manuals, Etc. Write Today for folder describing this compact, hand operated Corner-Rounder.

L.A.S. CHRISTIE CO., 177-A, St. Paul, Rochester, N. Y.



"Lever-Powered"

Model 20

CORNERROUNDER
SHEAR-ACTION SELF-SHARPENING

The advantages of

EYE-EASE RECORDS

- Clearly and definitely proven in a new booklet entitled - - "Smiling Eyes". Let us send you a free copy.



- Write us for your COPY

**NATIONAL
BLANK BOOK CO.**
HOLYOKE, MASSACHUSETTS

Mr. "P.A."!

Stretch your office supply budget. The products advertised on this page and page 25 are worth looking into. Write direct to the manufacturers or call in your local dealer.

PETROLEUM

DAILY AVERAGE OUTPUT of crude oil was sharply cut down during January, and at the close of the month was estimated at 3,314,700 barrels, or practically in balance with domestic consumption requirements. The shut-down policy in Texas fields was largely responsible for the adjustment. Meanwhile, gasoline storage climbed steadily to a peak of 82,785,000 barrels. Stocks of gas and fuel oil were generally down.

RUBBER

STOCKS OF CRUDE RUBBER in the United States at the beginning of the year stood at 256,618 tons, an increase of about 40,000 tons during 1937 and representing 7½ months' supply at current rates of use. A six months' supply is generally regarded as adequate. During the same period, world stocks were up about 70,000 tons to 570,000. For the past several months, exports from producing countries have been running substantially below permissible quotas, the deficiencies for the year amounting to about 13,000 tons. At the January 25 meeting of the International Rubber Regulation Committee, the quota for second quarter exports was reduced to 60% as compared with 70% for the first quarter and 90% during 1937. This represents a potential supply of 64,762 tons monthly.

TIN

WORLD'S VISIBLE SUPPLY of tin at the beginning of 1938 was 20,947 tons, up 133 tons for the year. Carry-over in the Straits Settlements was up 712 tons to 4,388, and at Arnheim it was up 125 tons to 1,709. Supplies are increasing more rapidly at the present time, and it is believed that consumers' stocks, which are normally figured into consumption as purchased, are also heavier than for some time past. December tin production, reported as 26,000 tons, was an all-time record, and the effect of the new quota reduction to 70% will hardly be felt during the first quarter.

ZINC

ORE PRODUCTION EXPANDED after the year-end lull, and is currently at about 7,800 tons per week. Surplus stocks of ore increased 4,635 tons during the month, to 17,975. Production of slab zinc is also increasing and is substantially in excess of new orders. Stocks of the metal, which accumulated rapidly in December, are even higher now, and are well over a month's shipments at present rates.

DEMAND FOR PETROLEUM products was spotty throughout the month. Unfavorable motoring weather curtailed the use of gasoline. Fuel oils were only in fair demand, though the situation improved somewhat toward the end of the month. Export trade in lubricants was active.



CURRENTLY, U. S. CONSUMPTION is about 30,000 tons monthly, down 40% from the rate of early 1937. World absorption is about 70,000 tons monthly, after having exceeded 100,000 tons in some of the more active months of last year. There is little indication of any substantial improvement in this situation during the first quarter. Factory interest has been reasonably well sustained, and speculative trading was active, particularly around the time of the Regulation Committee's meeting.



DEMAND HAS BEEN WELL SUSTAINED but has shown little tendency to follow on up to the higher price levels. The tin plate industry, at 35%, is at the lowest operating rate in years. There has been considerable purchasing for inventory, however, stimulated by quota reductions, and the Navy Department has been a heavy purchaser during the past month. World consumption in 1937 was of record proportions, averaging a gain of 14.3%.

DEMAND WAS LIGHT, but by no means stagnant. Shipments continued in fair volume, and unfilled orders were reduced by slightly more than 2,000 tons, to 45,965. There has been no pronounced buying movement for several months and it is now apparent that any substantial expansion will depend on a recovery in the steel industry, particularly in agricultural products.

PRICES WERE NOMINALLY unchanged. The market for crude was weak at the outset, but firmed under the influence of lower production. Gasoline prices were also weak, with wholesale quotations off about ¼ cent for the month, and with retail price slashing in eastern centers. Kerosene quotations were being generally shaded. Fuel oil firmed slightly in the closing week.

RUBBER PRICES, WHICH BROKE sharply at the beginning of the year, were firm and advancing during the first two weeks of January, reaching 14⅞ cents. From that time on there was a lull as the trade awaited quota action by the Regulation Committee, prices remaining steady at 14⅞, and touching 15 cents briefly. The announcement of the quota slash brought a sharp advance to 15⅜, but this was short lived in view of the unbalanced statistical picture and weakness in other markets. At the close of the month, quotations had again sagged to 14⅝ cents.

THE PRICE RANGE OF TIN was not quite so wide in January as in the previous month, but followed the same general pattern. From 41⅞ cents, quotations advanced by fractional stages to 43 cents in the first half of the month, and during this rise futures commanded a ⅓-cent premium over spot prices. The market was apparently strongly held, but had little buoyancy, and a sharp decline in London prices at mid-month was reflected by a drop to 41¾ in local quotations. Subsequently there was recovery to 42⅜, but in the final week there was a steady recession to 40⅓, and the month closed at 40⅓, which is below the low point for 1937.

THE PRICE STRUCTURE in zinc was unchanged in January, remaining at \$31.00-32.00 for ore and 5 cents for the metal, East St. Louis. Most of the present business is being placed on a firm price basis, though small tonnages are still being sold on an average price. The inference is that the low point has been reached and that any development in the near future will be upward.

**IT'S WHAT'S INSIDE
THAT COUNTS!**



—and that goes for

CRANE VALVES for Industrial Service

An egg may look fine, but it has to be good inside or its looks don't mean a thing. It's the same with valves. It's not the appearance, but the quality inside that tells the story of valve value in your plant. That is why Crane makes sure of uncommon quality* all the way through Crane valves by top-notch engineering,

by precise laboratory control of raw materials, by modern production technique, and by the most complete and exacting system of checks and tests of products used in the industry. Install Crane valves and you'll soon see how the hidden quality in Crane valves counts in performance for you.

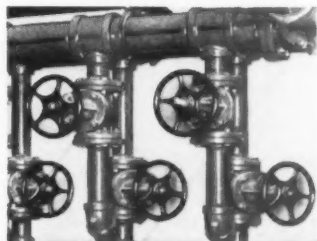
*If you want uncommon quality in valves of common use, look in the Crane No. 52 Catalog. In its 764 pages there are 38,000 piping items. Quick delivery is assured from a nearby stock. You will find Crane service, like Crane products, good all the way through.



CRANE

CRANE CO., GENERAL OFFICES:
836 SO. MICHIGAN AVENUE, CHICAGO

VALVES • FITTINGS • PIPE
PLUMBING • HEATING • PUMPS



WHERE THE LONG TEST BEGINS

Actual service is the surest test of valve quality. For three generations Crane has been building valves for the most exacting services, and this accumulated experience is the greatest aid to Crane engineers in making even the best valves a little better.



STANDARDS FOR "ROUGHNECKS"

A casting must meet the rigid Crane standards before finishing operations are started. Crane inspectors in the foundry caliper rough castings to make certain that body metal thickness is in accordance with the approved standards.



WHEN DIAMONDS TELL A HARD STORY

Each metal in a Crane valve must have the right degree of hardness for the part which it plays. Above, you see a Crane Research Engineer using an instrument of foremost design and unquestionable accuracy, to measure the hardness of a valve stem to determine its bearing qualities. Thus, Crane in another way makes certain that what's inside counts.



NO "PIGS IN A POKE"

Raw materials never enter into Crane manufacturing processes until their innermost nature has been disclosed and their quality proved. Above, you see specimen drilling from pig iron starting on the journey through searching laboratory tests, typical of Crane control over raw materials.

NATION-WIDE SERVICE THROUGH 134 BRANCHES AND MORE THAN 500 WHOLESALERS!



13: Cotton

HAROLD A. KNIGHT

IN the old days, it used to be "King Cotton"—America's leading industry. Then came the steel, automobile, and other great industries, and cotton went the way of many European kings. Some say that the Federal Farm Board of Hoover's regime clipped a few points off cotton's golden crown, and there are many that will say that the New Deal has finished dethroning cotton.

The foreign production of cotton this season is estimated at 19,550,000 bales, a new high record, comparing with 18,325,000 bales last season and with 13,474,000 in the season of 1934-35. Few will deny that the New Deal program of limiting acreage, plowing under cotton, attempts at price control, resort to Government loans, and what not, has turned over what once was the United States' almost exclusive business to foreign powers.

Other countries are apparently taking the opposite policies from the United States. Thus Argentina takes steps to produce as great quantities as possible, and Government officials state openly this will not be abandoned, no matter how low prices go.

Despite the artificial nature of the American cotton industry, what

with all regulations imposed, cotton must still be regarded as an important business barometer. As was stated in a previous article on Textile Statistics, the textile industry starts where the bales are broken open as a step toward manufacture.

Consumption of cotton is apparently a better general business barometer than production. The technical cotton man is of course interested in acreage planted, yield per acre, and weather conditions. Cotton consumption interests a wider circle, and its ebb and flow tends to harmonize with the other business barometers.

Cotton is by no means a dying commodity. Apparently no other growth furnishes a cellulose so pure and workable. World consumption in 1937 is estimated 30,550,000 bales, comparing with 29,019,000 bales last year and with 25,942,000

bales in 1935. Total consumption of foreign cotton was 17,850,000 bales, against 16,214,000 bales in 1936 and 14,363,000 bales two years ago, the 1937 figure having been a new high record and causing New Deal officials to stop, look, and listen.

New uses for cotton are being developed; cotton fabrics have secured wider favor because of attractive styling, and industrial uses of cotton fabrics are expanding constantly as the fiber contains inherent qualities not to be found in substitutes. A temporary stimulant is the boycott of Japan's silk and its goods. Cotton is an important element of these basic needs of mankind—clothing, food, and shelter—which have been touched upon frequently in this series of articles.

An important set of key statistics on consumption are those issued periodically by the Department of Commerce. Thus at the middle of January it was learned that American consumption of cotton during the last five months of 1937 was off about 16% from that for the similar period of 1936, thus being in harmony with other business barometers revealing the slump

**Next Month:
Steel Prices**

during the second half of 1937. The figures were 2,650,583 bales in 1937 against 3,176,502 bales in 1936.

On the same date at the middle of January the Census Bureau revealed consumption of all cotton in domestic mills in December, 433,058 bales as against 484,819 bales in November and 694,841 bales in December the preceding year. An explanation for this exceedingly sharp falling off from December of last year is given by John L. Severance, cotton editor of the New York *Journal of Commerce*, who states: "The decline was greater this year due to the accumulation of unsold stocks of goods at mills and to the general uncertainty as to the business outlook during that month. Mills made sales equal to production in only a few weeks from the middle of last March to December 1, running most of the time on the tremendous orders booked last winter. Such orders ran out in the fall and mills accumulated considerable quantities of goods unsold."

Cotton is a commodity which furnishes a popular indoor sport in the form of guessing statistics before publication. Bearing in mind the December mill consumption of 433,058 bales, it is interesting to note some predictions a few days before publication: 415,000 bales by the Cotton Exchange Service, 405,000 bales by the *Journal of Commerce*, and predictions of well under 400,000 bales by several leading cotton interests.

In the same Census Bureau report were also figures on stocks in public storage and at compresses; also figures on exports and imports, the December exports having been 751,001 bales as against imports of 8,638 bales, certainly sharp contrasts despite wails that we are losing out on exports.

The crop reporting board of the Department of Agriculture is authority on crops or production, given in terms of bales of 478 pounds each, estimated for this season at 18,746,000 bales, from 33,930,000 acres, a record American yield of 262.6 pounds per acre against the previous record of 212.7 pounds. In the present century a yield of 200

pounds per acre has been exceeded only six times. The heavy yield for this season is easily the feature, resulting from abandonment of marginal land, soil conservation, use of more and better fertilizer and better seeds.

To better understand the markings on the cotton barometer it is well to get an idea of price ranges. The depression low for cotton was 5 cents per pound, which by interesting coincidence was the depression low for another commodity regarded as barometric, copper. At the end of March, 1937, New York spot cotton rose to 15.25 cents per pound, peak for New Deal times.

Weekly reports of the world's visible supply of cotton are presented by the *Financial Chronicle*, itemizing the various storage points of the world and comparing the current situation with that of a year and two years ago. The 1937 season's supply rose to the record of 50,000,000 bales of all cottons, or 25,000,000,000 pounds, or the equivalent of 125,000,000,000 yards of average weight textiles. The Sino-Japanese war almost removed the biggest foreign customer from the fall markets.

An important item is the amount of cotton controlled by the United States Government, which now is 6,000,000 bales but may reach 7,000,000 bales before the season is over.

New York leads by far in cotton trading. In December, 82.9% of the dealings were on the New York Cotton Exchange, with 16.7% at New Orleans, the rest at Chicago.

It is predicted that 1938 will see drastic control of the cotton markets by the Government. The Government aims at 26,000,000 acres and a crop of only 10,500,000 bales.

JOSEPH W. NICHOLSON, City Purchasing Agent at Milwaukee, has been named a vice president of the newly formed Consumers' Foundation, Inc., a non-profit association to promote the consumer interest, informally described as the unofficial successor to the defunct NRA Consumers' Advisory Board.

Hold fast to SAFETY



SAFETY is an important element fabricated into every Plymouth Ship Brand Manila Rope. The Plymouth practice of building the maximum safety factor into rope commences with the expert selection and re-grading of fiber, and it follows through each step in manufacture, governed by purpose, experience and extreme care on the part of the Plymouth Ropemaker. These Safety Standards make for *controlled quality* in the finished product—quality that you may depend on for superior rope strength and longer safe service, often where life and valuable property are at stake.

Safety, for the handling of men and materials, is a paying investment, in no matter what form you buy it. You are always buying safety when you specify Plymouth Manila Rope.

PLYMOUTH CORDAGE COMPANY

North Plymouth, Massachusetts, and
Welland, Canada

Sales Branches: New York, Boston, Baltimore,
Philadelphia, Chicago, Cleveland,
New Orleans, San Francisco

PLYMOUTH
The Rope you can trust

Among the Associations

JANUARY 4

Oakland—Luncheon meeting of the **East Bay Group, Northern California Association**, at the Lake Merritt Hotel. Speaker: C. B. Hutchings, economist of Schwabacher & Co., "1938 Business—Hopes and Fears."

JANUARY 6

San Francisco—Luncheon meeting of the **Northern California Association**, at the Palace Hotel. Speaker: Frank T. Letchfield, consulting engineer and assistant vice president of the Wells Fargo Bank & Union Trust Co., "A Comparison of Industrial Economies—European and American."

JANUARY 10

Boston—Dinner meeting of the **New England Association**, at Schrafft's. Speaker: Prof. James H. Shoemaker of Brown University, "World Trends." The meeting was preceded by an afternoon conference of the paper committee, at which Miss Helen U. Kiely, Director of the laboratory of the American Writing Paper Co., spoke on, "The Value of Specifications in Buying Paper."

Columbus—Annual football party of the **Columbus Association**, at the Columbus Athletic Club. W. F. McKinnon, Sports Editor of the *Columbus Dispatch*, was master of ceremonies, and a number of athletic notables from Ohio State University were in attendance.

New Orleans—Dinner meeting of the **New Orleans Association**, at the Deutsches Haus. Speaker: U. S. Attorney Rene A. Viosca, "The Narcotic Traffic."

Wyomissing, Pa.—Meeting of the **Reading Association**, at the Iris Club. Motion picture: "Manufacture of Silk Hosiery." Discussion of association policies.

Houston—Meeting of the *Houston Association*. Speaker: C. E. Buchner of the Houston Better Business Bureau, "On Guard for the Community."

JANUARY 11

Cincinnati—Dinner meeting of the **Cincinnati Association**, at the Hotel Gibson. Speaker: Will Dern, "No Laughing Matter."

Tulsa—Dinner meeting of the **Tulsa Association**. Discussion of local and national association affairs, including a statement from the N.A.P.A. Policy

Committee. The newly elected officers assumed their duties at this meeting.

Oakland—Luncheon meeting of the **East Bay Group, Northern California Association**, at the Lake Merritt Hotel. Speaker: Julian Burnette, President of Polarine Fisheries, "Floating Fish Reduction Plants."

Saginaw—Dinner meeting of the **Saginaw Valley Association**, at the Bancroft Hotel. A program of motion pictures was presented, including scenes of U. S. Navy activities, State Highway Department work, and the dedication of the new Federal Building.

JANUARY 12

Milwaukee—Meeting of the **Milwaukee Association**, at the Elks Club. Speaker: George A. Renard, Executive Secretary of the N.A.P.A., "From One P.A. to Another."

Minneapolis—Annual meeting of the **Twin City Association**, at the Hotel Radisson. Fred S. Gram, City Purchasing Agent at Minneapolis, was elected president for 1938, succeeding W. H. Cauldwell of Waldorf Paper Products Co. Other officers chosen included: *Vice President*, C. B. Garvin of Northwestern Fuel Co., St. Paul; *Secretary-Treasurer*, Basil L. Nelson of Northern States Power Co., St. Paul; *Director*, Avon Lees of Northern States Power Co., Minneapolis.

Buffalo—"Executives' and Salesmen's Night" meeting of the **Buffalo Association**, at the Statler Hotel. Speaker: Edwin J. Schwanhauser, Manager of the Buffalo Works, Worthington Pump & Machinery Corp., and president of the Buffalo Chamber of Commerce, "Business Trends."

JANUARY 13

Springfield—Sixteenth annual Ladies' Night banquet of the **Western Massachusetts Association**, at the Hotel Kimball. More than 300 members and guests were in attendance. Entertainment, prizes, and dancing. President J. F. Drennan was chairman of the committee in charge, and served as toastmaster, introducing Mayor Roger L. Putnam of Springfield as guest of honor and principal speaker. Others serving on the committee included W. Lee Costigan, C. D. Jersey, E. J. Fleming, Jr., J. E. Conner, and T. H. Boeshaar.

Birmingham—Meeting of the **Birmingham Association**, at the Redmont Hotel. James H. Hard, Jr., personnel director of the Civil Service Board, outlined

the plans for the proposed uniform purchasing system for the county, and asked the association for its recommendations in drawing up the qualifications which would aid in selecting a head for the new department.

Seattle—Dinner meeting of the **Washington Association**, at the Washington Athletic Club. A sound motion picture on lubrication was shown by Paul Olson of General Petroleum Corp. Discussion as follows: "Current Economic Problems," led by Prof. Joseph Demmery, University of Washington; "Business Trends," led by Albert Stevens; "Cartels and Commodities," led by W. O. Dickinson; "Proposed Housing Legislation and Dangers Ahead in Abortive Boom," led by Edwin Colbert; "Business Conditions and Commodity Prices," led by C. R. Ragsdale.

Chicago—"Past Presidents' Night" meeting of the **Chicago Association**, at the Sherman Hotel. Speaker: George A. Renard, Executive Secretary of N.A.P.A., "From One P.A. to Another."

San Francisco—Luncheon meeting of the **Northern California Association**, at the Palace Hotel. Speaker: Frank D. Bryant, District Purchasing Agent, Standard Oil Company of California, "Scope of the Purchasing Department."

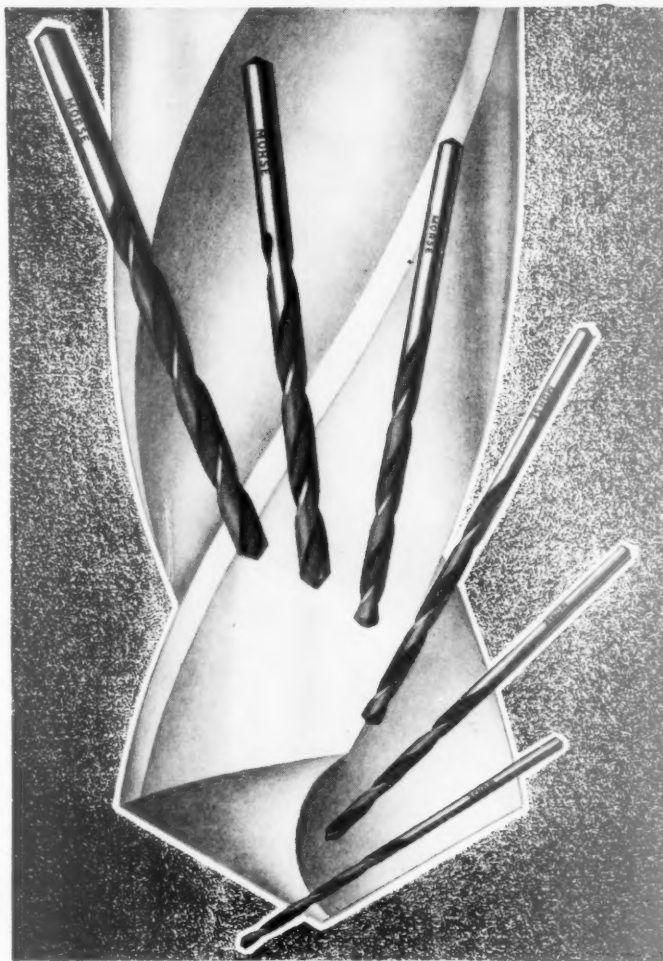
Cleveland—Dinner meeting of the **Cleveland Association**, at the Hotel Cleveland. Guest speaker: J. A. MacGoogan, Manager of the Youngstown Club. Samuel H. Elliott of Standard Oil Co., and J. R. Keach of Ohio Rubber Co., spoke on their respective industries.

Philadelphia—Dinner meeting of the **Philadelphia Association**, at the Bellevue-Stratford Hotel. Speaker: Prof. Howard T. Lewis of Harvard Graduate School of Business Administration, "Management's Attitude Toward Purchasing." The annual exhibit of industrial products and office equipment will be held at the Penn Athletic Club, March 9 and 10.

Los Angeles—Dinner meeting of the **Los Angeles Association**, at the Elks Club. Horace G. Lawrence of Southern Counties Gas Co. was chairman of the day. Topic of the Purchasing Clinic was "The Control of Purchases through Stores." Speakers: William Maddock, General Storekeeper of Southern California Gas Co., and Wayne R. Allen, Manager of Purchases and Stores, Los Angeles County. Jack Perkins, Purchasing Agent of California Hardware Co., continued his talk on a recent trip around the world.

JANUARY 14

New York—Meeting of the **Metropolitan Purchasers' Assistants Club**, at the Hotel Brittany. Speaker: Thomas F. Hinchey of the New York City Department of Purchases, and a graduate of the Bradford Dursee



**IN SMALL DRILLS AND
LARGE DRILLS, MORSE
QUALITY STANDS FOR
PRODUCTION EFFICIENCY
... REGARDLESS OF
SIZE, YOU CANNOT
BUY A BETTER
DRILL THAN MORSE**

• • •

MORSE

**THERE IS A
DIFFERENCE**

TWIST DRILL & MACHINE COMPANY
NEW BEDFORD, MASS., U. S. A.

• • •
**NEW YORK STORE, 130 LAFAYETTE ST.
CHICAGO STORE, 570 WEST RANDOLPH ST.**



Don't Gamble!

USE TIME TESTED UNITS IN SEGMENTAL GRINDING

Years have been spent by Sterling in perfecting its segmental wheel and chuck. For years hundreds of these units have been in constant operation—saving many dollars for their users.

Here is a light weight chuck of ample strength and a segmental wheel that will do all you ask of it—large plates or small pieces—they all grind or polish to perfection with Sterling segmental wheels.

THE STERLING GRINDING WHEEL COMPANY

Factory and Office: TIFFIN, OHIO
CHICAGO: 912 W. Washington Blvd.
DETROIT: 101-107 W. Warren Ave.

Abrasive Division of The Cleveland Quarries Co.

USE STERLING • THE WHEELS OF INDUSTRY

STERLING  **ABRASIVES**

Textile School, "Textiles." Mr. Hinchey's talk was supplemented by a film on textile manufacture.

JANUARY 15

Cincinnati—Conference of the Sixth District Council, N.A.P.A.

JANUARY 18

Pittsburgh—Dinner meeting of the Pittsburgh Association, for members only, at the William Penn Hotel. Speakers: George P. Brockway of the American Optical Co., Southbridge, Mass., and President of the N.A.P.A., "Choosing the Vendor"; and Robert C. Kelley of Converse Rubber Co., Malden, Mass., "Buying the Proper Service."

New York—Dinner meeting of the New York Association, at the Builders Exchange Club. Speaker: Prof. Erwin H. Schell of Massachusetts Institute of Technology, "Creative Purchasing." The meeting was preceded by an afternoon forum on "Relations with Salesmen."

Hartford—Meeting of the Hartford County Association, at the Hotel Bond. Speaker: William J. Ennis, City Building Supervisor.

Huntington, W. Va.—Meeting of the Tri-State Association, at the Prichard Hotel. Discussion of N.A.P.A. policy subjects. L. L. Aultz of Charleston was appointed chairman of the St. Louis Convention Committee.

Fort Worth—Meeting of the Fort Worth Association. Speaker: G. W. Armstrong, Jr., of Texasteel Mfg. Co., "Texas Highways."

JANUARY 19

Detroit—Meeting of the Detroit Association, at Webster Hall. Speaker: Thomas D. Jolly, Director of Purchases, Aluminum Co. of America, Pittsburgh, "Buying the Proper Quality."

Canton—Meeting of the Canton & Eastern Ohio Association, at the Hotel Onesto. Speaker: C. L. Chapman, exchange engineer of the Ohio Bell Telephone Co. at Akron, "Broadcasting Networks."

JANUARY 20

New Orleans—Plant visit of the New Orleans Association, at the Federal Fibre Mills, where the manufacture of cord and rope from raw material to finished product was shown.

Toledo—Dinner meeting of the Toledo Association, at the Waldorf Hotel. The meeting was preceded by a conference on the proposed N.A.P.A. Handbook of Purchasing.

San Francisco—Annual Ladies' Night meeting of the **Northern California Association**, at the Western Women's Club. Speaker: Rodman C. Pell, President of the Pelican Paper Co., "The Land of the Head Hunters."

Bethlehem—Meeting of the **Lehigh Valley Association**, at the Bethlehem Club. Speaker: Frank H. Carter of Baltimore, District Vice President, N.A.P.A. A motion picture on "Heat and Its Control" was shown through the courtesy of the Johns Manville Co.

Salt Lake City—Meeting of the **Utah Association**, at the Chamber of Commerce. Speaker: R. H. Wootton, Superintendent of the State Bureau of Criminal Identification.

JANUARY 22

Buffalo—Informal dinner dance of the **Buffalo Association**, at the Buffalo Trap & Field Club.

Dayton—Dinner dance of the **Dayton Association**, at the Miami Hotel.

JANUARY 24

San Francisco—Discussion meeting of the **Northern California Association**, in charge of the Educational Committee, at the Insurance Exchange Building. Topic: "When Are Price Bargainings and/or Competitive Bids Profitable?" A similar meeting was conducted by the East Bay Group in Oakland the following day.

JANUARY 25

Hartford—Meeting of the **Connecticut Association**, at the Hotel Bond. Speaker: Prof. J. H. Shoemaker of Brown University, "Present Economic Trends." A large delegation from the Western Massachusetts Association attended the meeting.

St. Louis—Dinner meeting of the **St. Louis Association**, at the Hotel York. Guest speaker: Keith J. Evans, Advertising and Sales Promotion Manager of Joseph T. Ryerson & Son, Chicago, "Is Industrial Advertising to Influence Purchasing Agents Worth Its Cost?" Member speaker: J. J. Sharkey of Western Cartridge Co.

Tulsa—Open meeting of the **Tulsa Association**. Motion picture, "Building the Golden Gate Bridge," shown by courtesy of the Bethlehem Steel Corp.

JANUARY 26

Rochester—Eighth annual "Informashow" of the **Rochester Association**, at the Sagamore Hotel. Senator Joe Hanley addressed the luncheon meeting held in connection with the exhibit, and Dr. Dexter Perkins of the University of Rochester was the speaker at the dinner meeting.

Continued on page 53



ATTRACTIVE COLORS

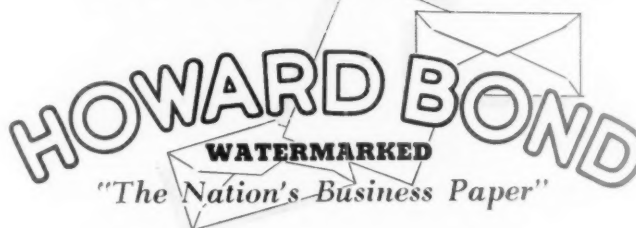
- PINK • AMBER • GREEN • CAFE
- BLUE • BUFF • OPALINE • SALMON
- CHERRY • GRAY • CANARY • RUSSET
- PRIMROSE • GOLDENROD

• AND THE WORLD'S WHITEST BOND PAPER

Compare it! Tear it! Test it!

And you will specify it!

ENVELOPES to MATCH



The Howard Paper Company, Urbana, Ohio

Send me the New Howard Bond Portfolio

Name.....Firm.....

Address.....

City.....State.....

(Please attach to your business stationery)

PU-2-38

to the P.A.
with an eye to
COST FIGURES

COLUMBIA OFFERS AN INVALUABLE SERVICE

*Have you ever made an
accurate analysis of
your typing expenses?*

- Undoubtedly, you have found that a higher paid typist actually produces more and better letters at less cost than a cheaper operator.
- Carbons and ribbons, inferior or unsuited to your own particular requirements can cost you MORE money, as does the inferior operator.
- Columbia, manufacturers of a wide variety of quality ribbons and carbons, is prepared to make an analysis of your regular and special office and factory needs. Write us your requirements or call the Columbia office nearest you.

COLUMBIA RIBBON & CARBON MANUFACTURING CO., Inc.

Main Office and Factory
Glen Cove, L. I., New York

BRANCHES

New York, Chicago, Philadelphia, Pittsburgh,
Cincinnati, Nashville, New Orleans,
Kansas City, Milwaukee,
Minneapolis

—also—

LONDON,
ENGLAND

MILAN,
ITALY

SYDNEY,
AUSTRALIA



PERSONALITIES in the NEWS

ROBERT J. DREW has been appointed purchasing agent for North Bergen Township, N. J., a position newly created by the Board of Commissioners. The purchasing office will operate within the Department of Revenue & Finance.

CHARLES V. COWENS of Bluffton, Ind., has been appointed right-of-way purchasing agent for Wells County, in connection with the county's road building program. He succeeds CLEM ROOK.

WILLIAM A. JEFFREY, Purchasing Agent for the Memphis (Tenn.) Power & Light Co., has been elected president of the Lions Club of that city for 1938, succeeding A. D. MCWHORTER.

FRANK WECHSLER has been appointed purchasing agent for the Erie (Penna.) School District, succeeding CARL SAPPER, who becomes secretary of the School Board.

C. W. NESS, Purchasing Agent for the Read Machinery Co., York, Penna., addressed the sales representatives and administrative officials of that company at the annual sales meeting last month, on "Problems in Purchasing Material." Mr. Ness also presided as toastmaster at the Banquet.

ROCKWELL LARRABEE has been elected president of the Bridgeport, Conn., Board of Public Purchases, succeeding FRED D. SCHWARTZKOPF. Mr. Larrabee has been a member of the Board for the past nine years.

FORREST V. SCHOONOVER has been named Municipal Purchasing Agent at Irvington, N. J., in addition to his duties as controller and WPA supervisor.

JOHN A. BREEN has been appointed City Purchasing Agent at Boston, Mass., succeeding D. FRANK DOHERTY, resigned. Mr. Breen's term of office extends to

April 30, 1939. He is an experienced business executive, serving as treasurer of the Robert A. Nordblum Mfg. Corp. and of the Raleigh Corp.

EDWARD C. PURRINGTON has been appointed purchasing agent of the Farr Alpaca Co., Holyoke, Mass., succeeding MISS JUNE L. WASSON, who becomes personnel manager for the company.

W. W. WACHTEL, formerly purchasing agent for the Loose-Wiles Biscuit Company at Kansas City, and for the past eighteen months associated with Calvert Distillers Corp., has been elected to the presidency of the latter company.

GEORGE H. BONSALE has been appointed to the newly created post of City Purchasing Agent at Quincy, Mass. Mr. Bonsale's business experience was with the U. S. Shipping Board. For the past five years he has served as, City Auditor at Quincy.

JAMES M. ALEXANDER, Purchasing Agent for the Cavalier Corp., Chattanooga, addressed the Engineers' Club of that city last month on the development of the furniture industry.

H. E. NYE, Purchasing Agent of Delco-Remy, Anderson, Ind., addressed a recent meeting of the Business and Professional Women's Club of that city on the topic, "What is Made in Anderson."

A. L. McMILLAN, formerly purchasing agent for the Warner-Quinlan Co., has joined the purchasing staff of the City of New York as buyer of fuels and lubricants.

GEORGE A. NEESHAM, Purchasing Agent of the Wyckoff Drawn Steel Co., Chicago, and President of the Illinois Manufacturers' Costs Association, addressed the Indian-

apolis Chapter of the National Association of Cost Accountants January 19th on the topic, "The Relation of Sound Purchasing Methods to Costs."

LAWRENCE E. FERGUSON, formerly of Lucey Products Corp., Tulsa, has joined the purchasing department of the Indian Territory illuminating Oil Co., Bartlesville, effective February 1st, and will direct the assembly, store and disposition of surplus materials.

Obituary

J. D. OLIGER, 74, Purchasing Agent for the Texas Power and Light Co., Dallas, up to the time of his retirement from active business in August, 1937, died at Los Angeles, December 30th.

WALDERN H. HOUGH, 44, Purchasing Agent for the Standard Oil Company of Indiana, died at Chicago, January 1st.

RAYMOND S. QUINLAN, WPA Purchasing Agent at the Newark Airport, died at his home in Bloomfield, N. J., January 4th, after a three months' illness.

HENRY F. WITGEN, 57, Purchasing Agent and Director of the W. Bingham Co., Cleveland, died of a heart attack at his office, January 10th. Mr. Witgen had been associated with the company for 37 years.

COL. JOSEPH W. FARRELL, 61, of the purchasing staff of Raybestos-Manhattan, Inc., Passaic, N. J., died at the Passaic General Hospital, January 22nd, of a heart attack. Col. Farrell was a graduate of West Point and was cited for meritorious service overseas during the World War.

FRANK S. JOHNSTON, 65, formerly purchasing agent of the Village of Freeport, Long Island, died January 27th in Meadowbrook Hospital, Brooklyn, after an extended illness.

FEBRUARY 1938



Quite seriously, sir . . . the new "Super-speed" L C Smith Typewriter is something to know about. It will save time and money for you, and save time and work for your office force. It is complete . . . modern . . . efficient . . . retains the *easy action* for which the L C Smith has long been noted . . . and like all L C Smiths will cost little for service and repairs.

Why not try one out right in your own office? Just phone any L C Smith Branch or Dealer; no obligation, of course.

THE NEW *Super-speed* LC SMITH



L C SMITH & CORONA TYPEWRITERS INC SYRACUSE N. Y.
Makers also of CORONA, the first PORTABLE TYPEWRITER

PAGE 37



The World Wears St. Louis Shoes

WHETHER FOOTWEAR preceded fig leaves is of speculative interest only but it is certain that footwear dates back beyond authentic historical records.

Foot protection was probably one of man's early desires and the instinct for ornamentation may be quite as old.

Through the centuries footwear has covered a wide variety of styles. From the simple sandals of antiquity stylists have veered from one grotesque outburst to another; sometimes decreeing tips so long they were folded back and tied to garters at the knees, at other times spreading out with absurd widths which provoked legislation to bring them within such reasonable (?) limits as six inches.

But shoes are indispensable—probably the most essential article of wearing apparel—so there seems little danger that some temporary whim will ever stampede the public into a barefoot craze. Even the nudists do not eschew shoes, which constitute an essential item in their full-dress requirements.

Feminine inclination may reduce the uppers almost to the vanishing point, but women will not discard their soles—or heels.

Reprinted by special permission from *St. Louis Commerce*, official publication of the St. Louis Chamber of Commerce.

FRANK C. RAND

Chairman of the Board
International Shoe Co.

Shoemaking, therefore, may be safely classed as a basic industry, unlikely to be menaced by the changes incident to human progress.

Since feet carry the whole weight of the active body, the prime concern for their protection is fully warranted.

The chief requisite of foot protection is a well-fitting shoe. Emphasizing the progress made in this vital need in recent times, a magazine article written in 1933 asked these questions:

"Do you realize that the modern era of shoemaking began only sixty-five years ago? That even as late as 1880 most women's shoes, even in this country, were made on absolutely straight lasts, with no difference between the right and left shoe? That fifty years ago there were only two widths to a size?"

And in these enthusiastic words the author appraises the efforts of American Shoe Manufacturers to meet the need:

"The modern shoe is one of America's greatest contributions to the happiness of the human race . . .

N.A.P.A. GENERAL CONVENTION COMMITTEE

St. Louis

May 23-26, 1938

GENERAL CHAIRMAN

Lee J. Bussmann,
Bussmann Mfg. Company

VICE CHAIRMAN

Erwin H. Doht,
Mallinckrodt Chemical Works.

INFORM-A-SHOW

Walter M. Lowry
National Lead Co.

PROGRAM

Dr. Fred W. Russe,
Mallinckrodt Chemical Works.

TREASURER

Norman N. Gould,
Aluminum Ore Co.,
East St. Louis, Ill.

PURCHASING AGENT

Dan M. Crimmins,
McQuay-Norris Mfg. Co.

SECRETARY

W. C. McCaslin,
Phelan-Faust Paint Mfg. Co.

AUTOMOBILES

Victor P. Roach
Supply Commissioner,
City of St. Louis.

ENTERTAINMENT (GENERAL)

William Grossman,
A. Leschen & Sons Rope Co.

ENTERTAINMENT (LADIES)

Lynn O. Hayes
Berkowitz Envelope Co.

GOLF

C. A. Wolfe,
Monsanto Chemical Co.

HOTELS

Wm. Krueger,
Ralston Purina Co.

PLANT VISITATION

John S. Chapman
Midwest Piping & Supply Co., Inc.

PUBLICITY

C. B. Singleton,
Shell Petroleum Corp.

RECEPTION

Conrad Hailpam,
Gaylord Container Corporation.

REGISTRATION

F. H. Wiesemann,
Fred Medart Mfg. Co.

SERVICE

George H. Brown,
Century Electric Company.

TRANSPORTATION

A. J. Owings,
Union Electric Company of Missouri.

American manufacturers today make the finest shoes that have ever been made by any race or group of artisans."

Recently, a St. Louis manufacturer has put on the market a shoe with a sole that can be molded to fit the peculiarities of the wearer's feet. What strides in half a century!

In the early days of shoemaking in St. Louis, shoes were made much as they were made by the ancient Egyptians 3000 years ago.

The first machine used in connection with the production of shoes was introduced about ninety years ago. It was a very simple machine for rolling leather and not for making shoes.

The sewing machine of Elias Howe was adapted for use in shoemaking shortly before the Civil War and the "McKay Sewing Machine" invented by Lyman Blake in 1858, gave a pronounced impetus to machine-made shoes. Later came the turn, the Good-year Welt, the stitchdown, and, more recently, the cemented shoe, and many refinements of basic methods.

The significant and astonishing fact is that modern shoemaking by machinery has been developed during the life of the industry in our city.

A veteran St. Louis shoe manufacturer, still living, personally knew practically all the men connected with the invention and introduction of shoemaking machinery in early years.

A line of shoes extensively sold today by a St. Louis manufacturer was proudly advertised little more than fifty years ago as "hand-made and home-made."

The modern machine-made shoe is a conspicuous example of careful planning and minute sub-division of labor.

Materials come from every part of the globe. The veteran St. Louis manufacturer referred to has enumerated shoe materials and their sources in a classic compilation:

"Hides and skins from all the countries on the earth. Rubber from the

tropical jungles of Africa and South America, Ceylon and Malay. Cotton from our Southland and from Sea Islands and Egypt. Silk spun by the worms of Italy and elsewhere. Flax from the emerald hills of Ireland, tannins from all the Continents and Hemispheres. Metals from the mines of the earth. Steel, iron, brass, zinc, tin, copper and coal from the anthracite mines of Pennsylvania to the smoky bituminous fields of Illinois.

"Wood pulp for carton and container boards from the forests of Canada. Jute from Calcutta and hemp from our own Missouri. Clay from Dixie and sulphur from sunny Sicily, logwood from Jamaica. Soap from old Castile and the sort 'that floats.' Sisal from the Bahamas, and the Yucatan Peninsula. Borax from Malay and pitch from Trinidad. Sponges from the sea and oil from the Cod. Paraffin from peat-bogs, potash from Germany, and rosin, tar and turpentine from the coniferous trees of the Carolinas. Zinc dust as deoxidizer and talc for lubricators.

"'Knapsack Para,' to produce cement, carried in packs by negro natives from interior sections of Brazil, far from railroads and civilization. Shellac from India, made from the excretions of insects which feed on trees found only in India. Gums, those sticky substances made from matter which exudes from a creeping plant indigenous only to Australia. Wax known as 'Car-nauba,' produced from leaves of a tropical plant found only in South America. Quebracho from Argentina. Gutta Percha, the product of the Malay Archipelago, and so on almost without end."

His careful analysis discloses the interesting fact that 291 items go into a pair of shoes such as made daily in St. Louis; and that 382 people have a part in the construction of each pair.

In the midst of a vast agricultural region and of rapidly developing industries, St. Louis shoe manufacturers appreciated the demand and need for shoes of enduring quality, and their product became famous for its high standard. St.

BRISTOL BRASS
RODS



**USED FOR
THOUSANDS OF
FABRICATED PARTS**

Tell us your FABRICATING PROBLEMS. We will gladly send samples and suggestions without obligation. We do not fabricate above parts ourselves.

ROUND, SQUARE or HEXAGON rods available in all sizes from $\frac{1}{16}$ to $3\frac{1}{2}$ inches.

UNIFORM TEMPER assures smooth grain and finish which greatly prolongs die and tool life.

FREE-CUTTING BRISTOL ROD increases production . . . edges and faces are held sharp and true . . . finished product is clean and bright.

SPECIAL BRISTOL ROD is made for full knurling, free turning and swaging, also for welding, repairing and forging.

BRISTOL BRASS CORP.

BRISTOL, CONN.

Brass and Copper Alloys
SHEET · ROD · WIRE
Established 1850



Louis-made shoes soon attained a reputation for long wear.

Steady operation brought skilled shoe workers into the St. Louis factories and soon the city attained high standing in the production of shoes of conspicuous artistic appeal. Manufacturers of our city led in the creation of novelty shoes and brought new distinction to St. Louis.

The evolutionary development of the machine-made shoe industry in St. Louis has been along these lines: At first, the shoes themselves were purchased in the East, where factories were first equipped with machinery. Little human help was needed to handle these shoes as they came into St. Louis and were later shipped out.

The next move introduced shoe factories into our city. Skilled shoemakers were brought in to supervise construction and instruct the local workers. The coming of new people into our midst created new needs, homes, food, clothing, transportation, education, religion, culture, as their activities were woven into the fabric of our city's expanding life.

Next came representatives of all those factors of the growing business of shoe manufacturing. Salesmen for tanners, leather dealers, textile mills, sole cutters, heel builders; salesmen of machinery, lasts, patterns, cartons, shipping cases, and many of the parts of shoes listed as "findings."

Instead of finished shoes, there poured into our city—machinery, equipment, raw materials of various kinds. All this meant the addition to our population of a host of men and women, boys and girls to operate all this machinery and to fashion these materials into merchantable shoes.

Later came supply factories and plants established here in St. Louis by men definitely linking their destinies with the life of our city, to provide the machinery and materials needed in shoemaking.

These brought more skilled workers into our midst with all their demands for home life.

Soon it was that raw materials

chiefly were coming into St. Louis, and their conversion into usable form made employment for thousands.

In 1816, three "cordwainers" (or boot and shoemakers) were listed in St. Louis; their names were Messrs. Rollins, Roberts and Cabeau.

By 1831, the number was increased to 13, and a tanner added.

By 1841, the number had risen to 58.

In 1848, St. Louis lists a shoe factory, but all the work was done by hand, true "manu-facture."

It was not until 1866 that a real shoe factory in the modern sense, using machinery, was established in St. Louis by Captain L. C. Bro-laski, which continued in active operation until the panic of 1873.

It was in the eighties that St. Louis began to be a real shoe manufacturing city. With the rapidly growing use of machinery, St. Louis started on its career to become the leading shoe city of the world.

In 1880, the United States Census of Manufacturers gives the entire state of Missouri 26 factories with an output valued at \$1,982,993. With the product of the 33 Illinois factories added, \$3,183,026, making a total of \$5,166,019; these two states could claim only 3.11% of the entire product of the United States.

New York's percentage was 11.44, while Massachusetts had the overwhelming output of 57.69 per cent.

21.56% of Nation's Shoes

In 1933, Missouri and Illinois produced 21.56% of the shoe values in the country; New York, although producing approximately ten million pairs more shoes than the two Midwest states, accounted for 17.96% of the national value. Massachusetts, while producing approximately fifteen million pairs more than Missouri and Illinois, was credited with a value of 23.14% of the whole nation.

The figures cited here have been based on the value of the output. In pairs produced the percentages

are somewhat different. New York, leading in quantity, is third among the three areas in value of output.

For more than fifty years Massachusetts, New York and Missouri and Illinois have produced approximately two-thirds of the shoe value of our nation. Sometimes the total percentage reached more than 70; at one time it dropped almost to 62. During the past decade, the division among the three groups (Missouri and Illinois being combined), has been almost equal, the percentages ranging from 20 to 24.

Early in the life of shoe factories in St. Louis, the machinery companies and shoe material supply companies saw the wisdom of establishing agencies here to supply the needs of the rapidly expanding industry in this city and adjacent territory.

Independent enterprises have sprung up until now more than fifty shoe manufacturing supply houses are listed in St. Louis.

In recent years, one of the St. Louis shoe manufacturers has established two upper leather tanneries in the St. Louis district, one ranking among the leading tanneries of the world because of its efficient, modern equipment and the quality and quantity of its output.

It is interesting to note that more than ten million pounds of by-products, hair, flesh and trimmings, are sold annually by this tannery, all taken from the hides before they are put in process of tanning. Approximately a million pounds of hair is sold by this one tannery, principally for use in refrigeration.

In order to supply cloth linings for shoes manufactured in the St. Louis area, a bleachery was established here a few years ago. Its principal customers for years were the shoe manufacturers, but this bleachery has developed other business in such proportions that it now has become one of the largest bleacheries in the West.

One of the St. Louis shoe manufacturers has established in the St. Louis trade area a complete textile mill, thoroughly equipped with the most modern machinery. This plant absorbs much of the cotton

raised in the surrounding community and supplies lining material for more than forty shoe factories and canvas for a factory making rubber sole shoes.

A rubber plant established in the St. Louis district in recent years produces heels and soles of superior quality which are used in the manufacture of shoes that are sold in every state of the Union and in several foreign countries.

Several factories for making and covering wood heels have been established in the St. Louis area.

Laces are produced by a braid mill in our city which has been developed on a sound and progressive basis to supply the needs of the shoe factories in our district.

Lasts, essential requirements in shoemaking, are provided to our shoe factories by the principal last-makers of the country. Two have thoroughly equipped plants in St. Louis; another large plant is locally owned and operated; other plants in St. Louis produce second lasts and do remodeling.

Patterns, the very life of artistic shoe construction, are supplied by many establishments in our city, several representing nation-wide institutions; others, the successful organization of local enterprise.

Cartons and containers for packing and shipping shoes from the St. Louis district make a market for large quantities of board. This need has been met by a company which has its main board mill in the immediate vicinity with two branch plants elsewhere in the St. Louis district. It is probably the largest plant in the Midwest and one of the largest in the country.

Decentralization Policy

In the process of decentralizing manufacture, a development which checks the depopulation of towns and cities in rich agricultural areas, many shoe factories have been established in trade centers in the St. Louis district. This practice has found approval among those who jealously guard the industrial growth of St. Louis.

A former president of the St. Louis Chamber of Commerce care-

THE MILLER LINE



INKED RIBBONS STENCIL INKS

CARBON PAPERS ESTABLISHED 1896

For real joy of living, the sensation of skating down the beckoning length of a glittering stretch of river, or stretching one's legs on a far flung lake, defies description.

For real beauty of writing, the effect of typing, multigraphing, mimeographing, hectographing letters, documents, reports, bulletins, with Miller Line Inked Ribbons, Carbon Papers and Stencil Inks, withstands comparison.

Manufactured exclusively by

THE MILLER-BYRANT-PIERCE COMPANY
219 RIVER ST., AURORA, ILLINOIS

INQUIRIES INVITED

fully analyzed the effects of such a policy on the business interests of our city and found them definitely beneficial.

A large percentage of the shoes sold throughout Missouri are bought from St. Louis. A survey covering women's and children's shoes handled in all but two of the 114 counties of the state, discloses the interesting fact that 75 per cent are bought from St. Louis distributors.

One outstanding distinction seems unquestionable: St. Louis, noted for its in-stock distributors, has more shoes always on hand ready for sale and shipment than any other city in the world.

From St. Louis and through agencies established here, the 86 shoe factories represented in the St. Louis Shoe Manufacturers Association obtain most of their machinery and machine supplies and practically all of their shoe materials.

In these plants 54,000 shoe workers are employed, producing approximately 75,000,000 pairs of

shoes annually, accounting for yearly sales of more than \$165,000,000. One year, when prices were high, the value reached \$225,000,000.

Shoe manufacturers, wholesalers and the industries directly associated give employment to 75,000 people in the St. Louis district.

Their pay-rolls are the largest in St. Louis and in the city alone exceed every year the purchase price paid by Thomas Jefferson for the Louisiana Territory, out of which have been carved eight entire states and parts of five others.

An additional distribution of dividends to stockholders in the St. Louis district probably brings the total disbursements of the shoe companies to \$25,000,000 a year.

What accounts for the pre-eminence of the city of St. Louis as a shoe center?

Advantages in geographical location, transportation facilities, proximity to the center of population and the principal raw materials used in making shoes.

THE BOFFEY PRIZE PAPER

The Boffey Award

is sponsored by the National Association of Purchasing Agents, as a memorial to the work of L. F. Boffey, former Secretary of that Association, long time Editor of "The Purchasing Agent," and publisher of PURCHASING up to the time of his death in 1937. The contest is open to students in accredited Colleges of Business Administration. Prizes totaling \$500 have been awarded from a fund presented for the purpose by the Purchasing Agents' Association of Chicago. A similar contest has already been announced for 1938.

The prize-winning papers were:

First: *An Organization Study of Twenty-Five Industrial Purchasing Departments*, by Joseph D. Yoder, Jr., Wharton School of Finance & Commerce, University of Pennsylvania.

Second: *Determination of Most Economical Quantity to Purchase*, by Stuart Wilder, Jr., Graduate School of Business Administration, Harvard University.

Third: *The Purchase Budget—Its Make-up and Use*, by Timothy J. Sullivan, School of Business, Columbia University.

Fourth: *Purchase Cost Accounting as a Method for Evaluating the Purchasing Function*, by R. Stanley Field, Graduate School of Business Administration, Harvard University.

Judges in the present contest were:

J. L. BURGESS
Director of Purchases
Brunswick-Balke-Collender Co.

E. T. GUSHEE
Vice President
Detroit Edison Co.

J. R. WHITEHEAD
Director of Purchases & Research
Fairbanks, Morse & Co.

An Organization Study of 25 Purchasing Departments

JOSEPH D. YODER, JR.

Wharton School of Finance & Commerce
University of Pennsylvania

PERHAPS THE ADVANTAGES of a modern well-organized Purchasing Department can best be seen by a comparison with old-fashioned purchasing by line executives.

Under this method the salesman would call at the plant, visit the shop foreman, the production manager or the superintendent. These various individuals would do the purchasing for their own needs. As purchasing with them was just an odd job, they did not devote much of their time to it. As a result, their purchases would be uncoordinated, wasteful and inefficient. For instance, two department managers might purchase lumber but their separate purchases would not be sufficiently large to get the quantity discount, which could be taken if their orders were combined.

Under this method their supplies would not be coordinated. In other words there was a great possibility that one plant or department would have large quantities of material on hand which they couldn't use—but another plant or department would be short this material, and—lacking a coordinated purchasing department—would have to go out in the market and purchase it.

Another great disadvantage of this method was that each department—purchasing for its own needs—purchased unstandardized articles. There was no uniformity of grades, time of purchase, method of purchase of the article itself.

Anyone with a little authority could spend the companies' money and no one was directly responsible. Friendship was apt to play a more important part in choosing the ven-

dor than was competition. Graft was prevalent.

Contrast this method, with all its inefficiencies and waste, to the well-organized purchasing department of such companies as Standard Oil of New Jersey, Western Electric and Consolidated Edison Co.

Under the method used by these companies one man is responsible for all purchases—he alone has authority to spend the companies' money for purchases. He knows the needs of all the plants; shifts goods that one plant doesn't need to the plant that does need them. He knows the most reliable vendors, the best prices, market conditions and what and how much is needed. He is a specialist. It is his responsibility and not merely another odd job of an already overburdened superintendent or manager.

It is the purpose of this paper to compare various purchasing organizations and to show how the more important organization problems have been met by the better developed purchasing departments. It is based on a survey of the following twenty-five purchasing organizations:

1. American Hard Rubber Co.
2. Consolidated Edison Co. of N. Y., Inc.
3. Continental Can Co.
4. Dairymen's League Co-oper. Assn., Inc.
5. DuPont
6. E. G. Budd Manufacturing Co.
7. Franklin Sugar Refining Co., (Phila. Branch)
8. General Foods Corporation.
9. General Printing Ink Corp.
10. Hecker Products Corp.
11. Ingersoll-Rand Co.
12. Kennecott Copper Corp.
13. A Philadelphia Chemical Company
14. Park and Tilford
15. Reading Railroad Co.
16. Sharpe and Dohme Co.
17. Sharples Specialty Co.
18. Standard Gas Equipment Corp.
19. Standard Oil Co. of New Jersey
20. S. S. White Dental Supply Co.
21. Sun Oil Co.
22. United Gas Improvement Co.
23. U. S. Rubber Products Inc.
24. United Fruit Co.
25. Western Electric Co.

By type of business they divide as follows:

- 10 General manufacturing companies
- 4 Food products companies
- 3 Public Utilities
- 2 Oil Companies
- 2 Chemical Companies
- 2 Pharmaceutical Companies
- 1 Import Firm
- 1 Railroad

In total annual purchases the companies varied from \$1,000,000 in several companies to \$150,000,000 in

two of the larger companies. All together, the 25 companies purchased approximately \$1,000,000,000 worth of goods. The number of people employed in the various purchasing departments ran from 2 to 150 and the total for the 25 departments approximates 800. It has been the attempt of this survey to cover a fairly wide and representative group of industrial purchasing organizations.

Of the 25 companies interviewed purchasing agents report as follows:

- 9 to the President.
- 5 to the President—the Purchasing agent is here also Vice President in charge of Purchases.
- 4 to Executive Vice Presidents.
- 2 to the Executive Committee.
- 2 to the Treasurer.
- 1 to the Vice President in charge of Purchasing and Stores.
- 1 to the Plant Superintendent (a branch office).
- 1 to the Vice President of Production.

To the President

It can be seen that the majority of the Purchasing Agents in the companies interviewed report directly to the President. The Standard Oil Co. of New Jersey has an interesting arrangement. The Purchasing Agent reports to the President—and, he is also a Director in the company. In the other cases the Purchasing Agent reports to the President alone. When such is the setup, the Purchasing Agent usually has more responsibility in any forward or unusual purchasing that is done than if he were to report to the Treasurer or Production Manager.

Purchasing Agent is Vice President of Purchases

This is the case with a large food company, where in a single purchase the buyers can spend as much as \$2,000,000 without getting permission from a higher executive than the Purchasing Agent. Two large utilities and two other companies have the same arrangement.



FINE QUALITY, EVEN GRAINED SHEETS for Etched Ware, Novelties, etc.

Because of its even grain and uniform surface, Seymour Nickel Silver has for years had wide preference among makers of etched hollow ware, clock dials, costume jewelry, smoking accessories, medals, seals and signs.

If your plant uses the etching process, we invite you to investigate Seymour Nickel Silver—a blend of nickel, copper and zinc, alloyed under rigid pyrometric control and laboratory inspection. Samples for test, sheet, wire or rod, sent without obligation.

SEYMOUR
NICKEL SILVER

THE SEYMOUR MANUFACTURING CO., 55 Franklin St., Seymour, Conn.

Ends Locker Room Evils



Saves Space

COMPACT
—3 persons
per sq. ft.

SANITARY
—open to air
and light

FITS IN
ANYWHERE
—any length

No. 3U
Patented and
Patents Pend.

Peterson Utility Wardrobe

Extensively used in leading offices, stores and plants to reclaim valuable floor space and to end locker problems. 4 ft. x 1 ft. rack provides individually separated, fully ventilated accommodations for 12 persons—hats, coats, overshoes and umbrellas. Available in any length (by the foot). Rigid steel construction; balanced. Portable (with tired rollers) or stationary types. Detachable or permanently attached coat hangers. Finishes in keeping with appointments of the finest offices. Shipped prepaid. Write for circular and prices. (Specify size, color, etc.)

VOGEL-PETERSON COMPANY, INC.

Manufacturers of the complete line of Peterson
Check Room Equipment—standard in fine
buildings everywhere

1815 No. Wolcott Ave. CHICAGO, U. S. A.
Representatives in Leading Cities

To the Vice President

Moderately large to large manufacturing companies, purchases of \$1,000,000 to over \$20,000,000, make up this group. Purchasing here too is an important function but the Purchasing Agent is usually more restricted in authority. In these cases important decisions (as to forward buying, for instance) must be passed on to a higher executive in the company. It must be borne in mind that the organization policy of the company as a whole, as well as the importance of the purchasing function, often determines the place of the Purchasing Department in the companies' organization. For instance a Purchasing Agent who reports to the President in one company may have just as much authority and responsibility as a Purchasing Agent in another company who is himself a major executive, as Vice President.

To the Executive Committee

This is the case with a cooperative food distributing company and a

medium sized chemical company. As a rule when a Purchasing Agent reports to the Executive Committee, all important problems are decided by the committee. In many other cases Purchasing Agents say that for all practical purposes they report to the Executive Committee. In other words, it is the Executive Committee that decides the policies that the Purchasing Agent must carry out.

To the Treasurer

This was the setup in two manufacturing companies with purchases of \$1,000,000 and \$8,000,000. When the advisability of certain purchases depends on the current financial position of the company as well as market conditions, it is advisable for the Purchasing Agent to report to the Treasurer. As in many instances purchases are the greatest expenditures of a company, and as it is the Treasurer's job to watch expenses, there is good reason for placing the Purchasing Agent under him. This should be the case only where purchasing presents greater financial than technical problems.

To the Vice President in charge of Purchases and Stores

This is the arrangement used by Consolidated Edison Co. of New York. Through this method the company gets the benefits of having its Purchasing Agent a major executive and at the same time they have efficiently coordinated purchasing with stores.

To the Plant Superintendent

In most cases branch or local Purchasing Agents report to the Superintendent, Works Manager or some similar line executive. The general practice is that the central office forms the policies of the local agents while the superintendent at the plant is their direct "boss."

To the Vice President of Production

This is the case in a Pharmaceutical company with purchases of about \$2,000,000. This is supposed to be the setup in smaller companies where purchasing is not considered a major junction. When such is the

case it is logical that the Purchasing Agent report to the Production Manager inasmuch as he knows and has to use the goods that are purchased. The tendency shown by the better organized companies, however, seems to give the Purchasing Agent more authority and makes him report to the President.

Functions of the Purchasing Department

Naturally enough each of the 25 companies interviewed had a different type of organization. It is the purpose here to show which functions actually pertain to purchasing and the advantages of including under purchasing such functions as inspection and follow-up.

Primary Functions

The primary function of the purchasing department is of course making the purchase. This includes the functions of deciding where to buy, getting the best price, making the contract, placing the order, and such duties as filing. These functions are, as a rule, common to all Purchasing Departments.

Secondary Functions

The bigger problem is deciding what other functions should be included in the Purchasing Department. Some of the more important secondary functions often performed by the Purchasing Department are:

1. Check Invoices
2. Follow-up Orders
3. Inspect Goods
4. Traffic
5. Stores
6. Salvage Unused Material
7. Write Specifications
8. Decide How Much to Buy

Check Invoices

In many cases it is the duty of the Purchasing Department to check invoices—at least as to terms, quantity, and unit prices. This is rightly a function of the Purchasing Department as it is more familiar than anyone else with the purchase contract or agreement. As a rule the Accounting Department usually rechecks the invoice as to price and

extensions. In many cases the checking of invoices forms a method of control by the central purchasing office over its branches.

Follow-Up

Follow-up is merely checking up on goods ordered to see that they will arrive on the contracted or specified date. This problem has been met in many different ways. The three most usual are as follows: central follow-up, local follow-up by plant, and a combination of the two.

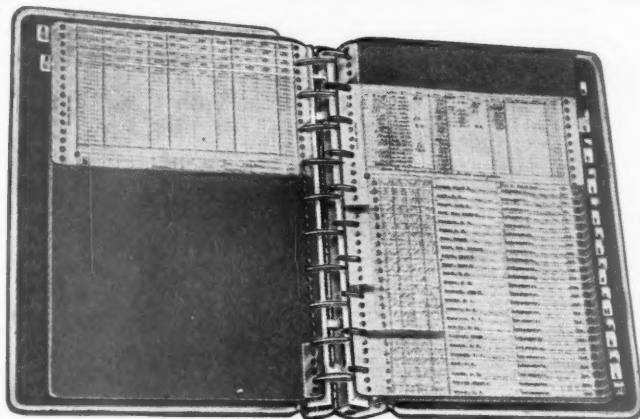
Many companies (as a rule not the largest companies) have found that under complete central follow-up they have been tracing many unnecessary items. As a result they have shifted this function over to the local plants. This has its drawbacks, though, as these plants are not as well equipped to follow-up orders as the central office. A better plan, though not so widely practiced, is to have central follow-up on the important items and local follow-up on routine purchases.

Some companies let the buyer of the article do the following-up as he is most familiar with the purchase. Some people would disagree with this however as they want the buyers to be free of all detail so that they can spend their time on buying efficiently. Other companies, when it is extremely important that the goods arrive as ordered, maintain an elaborate follow-up department. E. G. Budd Manufacturing Company has men in the follow-up department whose duty it is to go around to the various steel plants and keep tabs on their orders and if need, force them along. This is a company which purchases great quantities of steel and operates on a mass production basis. If their orders weren't received on schedule the plants would have to close down. Such stringent follow-up is only necessary in certain instances, i.e., in a sellers' market or if great losses would occur if goods were not received as ordered.

Inspection

The function of inspecting the goods ordered does not seem to be

Continued on page 53



VISIBLE RECORD BOOKS WILL SPEED YOUR WORK AND INSURE ACCURACY

Purchase Records, Quotation Records and Perpetual Inventories are among the most active and most valuable records of an organization. For this reason, they should be maintained in Visible Record Binders for quick reference and protection against loss.

Send For Sample Forms and Literature

We regularly carry in stock a wide range of forms especially designed for purchasing offices—as well as records for other departments of a business. Write for complete booklet—it illustrates and describes up-to-date methods of interest to the Purchasing Agent. We also carry all types of binders—get our prices on Record Keeping Equipment.

THE C. E. SHEPPARD COMPANY

44-01
Twenty-first St.

Cesco

Long Island City
New York



DAYTON GRINDING WHEELS

Regardless of your requirements, you can obtain a Dayton abrasive wheel of the exact specifications the work demands. On the market for years and the preference for a wide range of operations. Write

The
Simonds-Worden-White Co.
Dayton, Ohio
FACTORIES AT: Dayton, Cleveland,
Beloit, Buffalo

PRINTING

Lowest prices on
Letterheads Envelopes
Statements
Salesbooks Cards
Invoices Circulars

•
5000 Envelopes \$8.40
delivered

•
Send sample of your
present printing for bid

•
Drop us a postal for real
money-saving
Price List

•
DAVID NICHOLS CO.
Box 84 Rockmart, Georgia

COILED WIRE SPRINGS

WIRE FORM SPECIALTIES



Springfield, Ohio, U. S. A.

*"Where Your Patronage
Is Appreciated"*



TRADE MARK

ALUMINUM OXIDE
SILICON CARBIDE
CORUNDUM
(AFRICAN)
TURKISH EMERY

Refiners and Makers
of
ABRASIVE GRAINS
AND
FLOURS

AMERICAN ABRASIVE COMPANY
WESTFIELD, MASS.

Steel Plant Program

The steel industry will make expenditures for new plant equipment and construction of at least 165 million collars in 1938, bringing the total for such spending in the four years 1935-1938 to more than 840 millions. The estimated total, issued by the American Iron and Steel Institute is based on reports representing over 90% of the nation's steel making capacity. The estimated program for the current year is slightly more than half the amount expended for such purposes in 1937, when the industry spent 320 millions for plant equipment.

F. G. Space

(Continued from page 23)

He has a camp home, too—"The Needles" on Lake Hortonia in Vermont, just fifteen miles east of Fort Ticonderoga, and the two hundred mile drive does not interfere with his enjoyment of this woodsy retreat for at least a half dozen weekends each summer. Vermont, his "State by adoption," is one of Fred's lively enthusiasms. The fish are cagier and less plentiful in Lake Hortonia since Fred started going there a decade ago, though he insists there is no connection. However, since it is the lamentable fact, he manages to get up to Canada each year and plies the waters at a club where fishing is still a sport and you throw back everything except what is actually used for food.

Active by nature, he does not claim exceptional proficiency at any particular branch of athletics, but he has performed creditably in several fields and has always enjoyed competitive sport. As a high-school boy, he ran on the relay teams. For years, he was an enthusiastic tennis player. But above everything else, he enjoys horse-back riding.

HIS FAMILY IS GROWN NOW. The twin daughters, Lillian and Virginia, graduates of Pratt Institute, have their own homes at Chappaqua, N. Y., and LaGrange,

Improved WIREGRIP BELT HOOKS

WIREGRIP comes on processed cards that prevent waste—every hook can be used. Protects fingers. Applied with a WIREGRIP Lacer or any other standard make belt lacing machine.

Flexible BELT LACING

STEELGRIP is a stronger lacing for all power and conveying belts. Clinches smoothly into belt, compresses ends, prevents fraying. 2-piece hinged rocker pins prevent excessive wear. In boxes or long lengths.

Write for Catalog
ARMSTRONG-BRAY & CO.
"The Belt Lacing People"
321 N. Loomis St.
Chicago, U. S. A.

**23rd Annual Convention
National Association
of Purchasing Agents
St. Louis... May 23-26**

Featured in
PURCHASING'S
**1938 SPECIAL
CONVENTION ISSUES**
**MAY - Pre-Convention
JUNE - Convention Report**

Leading industrial advertisers are represented every year in these valuable long-lasting numbers. It will pay you, too, to include them in your advertising plans. Write for full details now.

PURCHASING
ONLY NATIONAL MAGAZINE PUBLISHED
EXCLUSIVELY FOR PURCHASING AGENTS

Ill., respectively, and there are four grandchildren, the latest arrival being just about a month old as this goes to press. The older son, Robert, studied architecture at the University of Michigan, and is now with the Great Lakes Steel Company at Detroit. Frederick, the younger son, is a junior in aviation engineering at the University of Michigan. His vacation jaunt of last summer, delivering a car on the Pacific Coast, landing a summer job with the Douglas Aircraft Company at Santa Monica, and

then flying home, indicates that he shares a good deal of his father's independent and adventuresome spirit.

In the community, Fred has an honorable record of public service, the natural result of identifying himself with the things that make for the general welfare, where his abilities are as naturally pressed into use. He has been on the Board of Education for nine years and is its present chairman, served as a member of the Board of Assessors for three years, is a past president of the Chamber of Commerce, a director of the Ansonia Y.M.C.A. and the Shelton Building & Loan Association, on the Executive Board of Housatonic Council, Boy Scouts of America, and chairman of the troop committee. He has held about every office there is in the Congregational Church, and is a past High Priest of the Royal Arch Masons. He is a member of the Edgewood Club of New Haven and the Woodbridge Hills Country Club.

In purchasing association work, he served as president of the Connecticut Association in 1924, and later as a director of the N.A.P.A. It is traditional that the annual meeting of the Connecticut Association is held at Seymour, under the auspices of the "Associated Communities"—Derby, Shelton, Seymour and Ansonia—and he has a large share in making those meetings consistently successful. He has been a frequent attendant at the national conventions, and in addition to his constructive participation in the serious side of the program, he generally manages to encounter some experience on the trip that is just a little out of the ordinary. Stopping at Grand Canyon on the way to Los Angeles in 1926, instead of taking the conventional ride down Bright Angel Trail, he got a horse and rode off into the country, making the acquaintance of a philosophical cowhand who could recite whole reams of poetry and discuss modern literature with critical appreciation. On the return trip, at Lake Louise, he again did a little independent exploring. With two other travelers, more

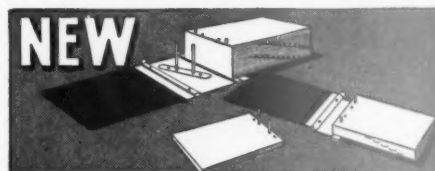
daring than prudent, he had a unique experience on Victoria Glacier, that might have had serious consequences but fortunately ended only in adding another chapter of stimulating adventure.

HIS EXCEPTIONALLY WIDE CIRCLE of friends, his work, and his community activities, make for a very busy life. Fred enjoys them all. His only plaint is that they leave too little time for the enjoyment of his home, which remains as always the center of his interest. There he has a little room where he is surrounded by the pictures of his family, the trusty golf clubs which have replaced the tennis racket since a trick knee slowed down the legs but not the spirit, and by his personal library.

The reading of good books has always been an important part of his life, dating back to the days when his interest was awakened by the well chosen volumes which Mr. Farnsworth casually placed upon his desk at the Y.M.C.A., and which he recognized as being intended for his reading. His taste in this respect is a catholic one, embracing biography, fiction, philosophy, and particularly those works which deal with the health and beauty of the outdoors. He has an appreciative ear for a finely turned phrase or an apt description. Without conscious effort, he can repeat many a passage that has appealed to him in his reading, especially if it draws its inspiration from nature and always with the proviso that the words clothe some memorable thought.

That retentive memory and facility for picturesque illustration are reflected in his own style of speech and writing. In his clear and simple language there is many a touch that bespeaks familiarity with the masters, mellowed by his own personality and experience, and made thoroughly his own.

He is not a prolific writer. One reason is that he doesn't rush into speech or print unless he has something to say. And for that same reason, his words are always worthy of attention. —S. F. H.



RECORD-KEEPING EFFICIENCY..

MOOORE'S Loose Leaf Binders and Record Sheets will help you keep your records more conveniently, more economically. Simple and accessible. A great number of sheets may be safely held in small space. Sheets may be removed instantly without disturbing others. Pages easy to transfer. Held in perfect security and alignment.

FREE BOOK

Contains life-size bookkeeping forms completely filled in, illustrating uses—a MOORE form for every kind of record. Will help you with your accounting problems. Used by over 300,000 leading firms. Fill in coupon, attach to letter-head, mail, and 140 page book will be sent free.

JOHN C. MOORE CORP., Est. 1839
6210 Stone Street, Rochester, N. Y.

Name.....
Business.....
City..... State.....



Just cut and dried gummed paper will not make good sealing tape. Tough kraft is necessary to withstand rough usage; ample application of good strong glue is needed to assure permanent adhesion... and expert mechanics to combine them—that's why many purchasing agents are asking for Red Streak Tape. It costs no more! Write for information.

THE BROWN BRIDGE MILLS, INC.
TROY, OHIO



NEW PRODUCTS & IDEAS

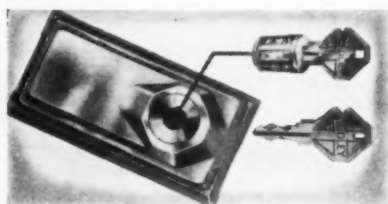


**DRUM
TRUCK**

No. 541

SPECIFICALLY DESIGNED TO handle standard 50-gallon I.C.C. drums weighing up to 700 pounds in factories, oil stations, stores, warehouses, etc. It is provided with two grab members, curved and pivoted to adjust themselves to the surface of the drum just below one of the projecting rings. The truck is moved up to the drum, with handle tilted forward in the engaging position. When the truck is tilted toward the operator, the grab members close in with a firm grip, holding and elevating the load in position to be transported to the new location. The drum is deposited by merely tilting the handle forward, which disengages the side members and automatically releases the load.

Use coupon below



BAR LOCK

No. 542

A NEW CONCEALED INTERLOCKING slide-bar principle has been incorporated in this lock for doors, delivery trucks and trailers, armored cars, storerooms, refrigerators, and in general any location where padlock and hasp are now used. There are no exposed openings to be pried or cut open. The hardened steel strike is concealed by the heavy forged steel bar, and inter-

locks with it, being securely anchored by oversize machine bolts reinforced with a heavy gauge steel back plate. The lock itself is of the cylinder type with four sets of tumblers, operated with a special 4-way key. This design is said to be proof against picking, drilling, or skeleton keys. The keys are registered by the manufacturer so that duplicates can be obtained only by presenting the registration tag.

Use coupon below

**HIGH SPEED
SHEAR**



No. 543

EXCEPTIONAL FLEXIBILITY and accuracy are claimed for this new model shear with special lower cutting head. Adapted for general use in cutting formed pieces of sheet metal, it is particularly useful in trimming the flash from stampings after the first draw, on short runs, or when the formed piece is bulky. No starting holes are needed for inside cutting, no further finishing is required after the shear cut, and trimming dies may be eliminated by its use. It will cut irregular shapes, and on a formed radius as small as $\frac{5}{8}$ " up to 90°.

Use coupon at left

**VERTICAL
PLAN FILE
CABINET**



No. 544

VERTICAL FILING OF tracings, etc., in 9 × 12 size or up to 24 × 36 inches, in this new line of cabinets requires only one third the floor space of ordinary lid-type cabinets, and there are additional advantages in dust-proof protection, flat working space, etc. The folders are kept firmly in upright position by a series of spring compressors in each drawer, providing twenty pockets, each accommodating three folders, fifty sheets to a folder. This arrangement permits a folder to be partially withdrawn and reference made to its contents like the pages of a book. The drawers can be manually operated or connected with an air

PURCHASING

11 West 42nd St.
New York, N. Y.

Please send complete data on the New Products listed by number below:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Name.....

Company.....

Address.....

City..... State.....

pressure system that controls the heavy drawers simply, easily and automatically. Drawer mounting is on progressive roller bearings affording smooth operation and support in the extended position. There are 36 different units, including a special design for filing roll tracings, and all units can be assembled in combination to meet any filing need.

Use coupon page 48



AIR OPERATED HAND GRINDER

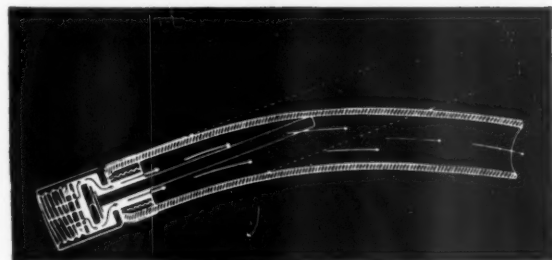
No. 545

WEIGHING ONLY ABOUT 2 pounds and designed with rounded corners and edges to fit the operator's hand, this portable high-speed grinder has a rated air consumption of 8 cu. ft. per minute at 100-pound pressure. The spindle includes a central chamber for lubricating oil, which is fed to the ball bearing by centrifugal action, and oil flow stops when the spindle is not rotating. Additional cooling action is obtained by directing air from the turbine to the bearings.



AIR- SAVER VALVE

No. 546



OPERATING ON A PISTON principle, without buttons, levers or springs, this new valve for air or fluid lines is closed by the pressure of air or water in the hose, positive leak-proof closing being assured on 9 pounds pressure. A slight thumb pressure on the hose end, utilizing the weight of the hose and nozzle, opens the valve; otherwise it is in the closed position unless actually in use. Applicable to metal working industries,

a name to remember
when you need Springs
of any kind—Small
Stampings—Wire
Forms—or Cold rolled
Spring Steel.

"B" is for Barnes—and
a Better Spring for your
mechanism.

The Wallace Barnes Co.
DIV. ASSOCIATED SPRING CORP.
Bristol, Conn.

*Specializing in
Paper Cutting Knives*

U.S. PAT. OFFICE
**MICRO
GROUND**
U.S. PAT. OFFICE

*"That he who cuts
may cut well"*

LORING COES COMPANY
Established 1830
MACHINE KNIVES
WORCESTER MASSACHUSETTS

where compressed air is used to keep fine machine work free from cuttings, and the operator need not take his eyes off the work to use the hose. The water-hose model, with standard connections, is valuable and economical in connection with washing racks, radiator filling, and a variety of industrial processes.

Use coupon page 48



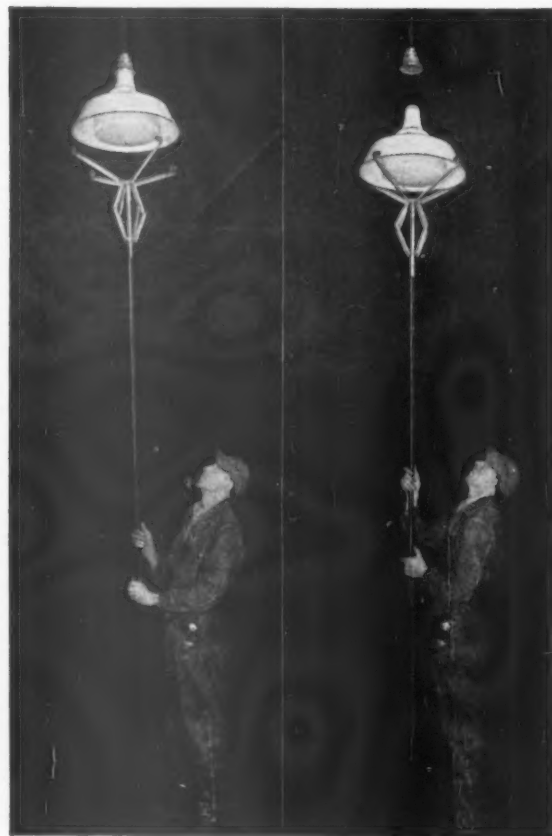
HAND TRUCK FOR BARRELS

No. 547

CONVENIENT HANDLING of wood or steel barrels and drums from keg size up to 36" high is provided by this new hand truck, which has a hook and a tongue member mounted adjustably on the vertical column. In operation, the tongue is

positioned about an inch above the lower edge of the barrel chime while the truck is held against the barrel at both top and bottom. The hook is then placed over the edge of the barrel and the wheels are allowed to roll back until the tongue slips under the lower edge of the chime. Then by means of the handle and a foot pedal, the wheels are pushed up to the load, and a quick tip aided by this leverage brings the load to the balancing position, where it is easily moved. The wheels are 10 X 3 inches, mounted on roller bearings, and can be furnished with steel, hard rubber or pneumatic tires. Overall width is 25 inches. It is adapted for operation in restricted spaces, and one man can handle loads up to 900 pounds.

Use coupon page 48



FLOOR-SERVICE LIGHTING FIXTURES No. 548

DEVELOPMENT OF A SPECIAL bell-mouthed reflector hood design, plus a new clamping tool on the end of a pole, permits the servicing of overhead lighting equipment from the floor. A quarter turn on the reflector rim disconnects both reflector and lamp so that they may be cleaned and serviced on the floor. They are then just as easily replaced, both electrical and mechanical connections being made simultaneously by the engaging of a 3-point bayonet coupling. Contacts are circular in form and have broad flat surfaces that are self cleaning as the reflector is turned.

Use coupon page 48

"SHOW-WINDOW" CONTAINER No. 549

A UNIQUE AND PRACTICAL DISPLAY container for cakes and similar bakery products consists of a double collar of folding boxboard which locks a sheet of cellophane in place to serve as the cover of the package. The package is simply and speedily assembled. The inner collar is fitted over a wooden block and the circular bottom piece is locked into position by

KROM-NICK

18-8 Stainless Steel

Cap Screws • Machine Screws • Wood Screws
Lag Screws • Rivets • Washers
Cotter Pins • Taper Pins

Wide range of sizes from stock

A. D. DARRAGH & CO.

Established 1929

92 West Street

New York, N. Y.

Speedy and Accurate Hand Sawing

is now possible. This revolutionary, heavy duty hack saw frame, drop forged from hard aluminum alloy has changed the entire hack saw picture. Absolutely rigid with machine-type blade holders, it holds an unbreakable, high-speed-edge blade at machine tensions. Double handed grips increase power and accuracy. Improved design applies power below the line of cutting and prevents the blade from sticking in the cut. Try it and you will be satisfied with no other. Your dealer will demonstrate.

ARMSTRONG-BLUM MFG. CO

"The Hack Saw People"

5760 Bloomingdale Ave. Chicago, U.S.A.

Write for
Circular



merely pressing it down until it engages in slots for that purpose. The collar is sufficiently high to clear fragile icings, etc. The cake is placed in the container thus formed and a cellophane sheet is then placed over the top. The printed outside collar is now slipped down over the entire assembly, its snug fit pulling the cellophane taut and holding it in position as a gleaming window for the display and protection of the contents.

Use coupon page 48

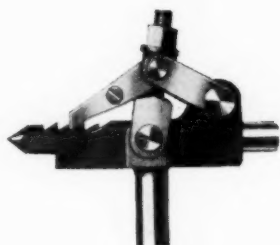


CORNER ROUNDER

No. 550

A HAND OPERATED, portable machine for round cornering cards, sheets, booklets, tags, labels, samples, etc. It is also practical for use on rubber, leather, fabrikoid, celluloid, and light metals. Not only for improving appearance, round cornering serves the practical purpose of preventing bent, curled, and dog-eared corners, and adds to the ease of handling papers and cards. The machine is provided with four separate cutting units, in radius of $\frac{1}{8}$ to $\frac{1}{2}$ inches, adaptable to sizes ranging from a business card to large blue-print sheets. Accurate fixed metal guides, self-sharpening shear action, a rubber inset to prevent "creeping," and one-piece spring-action handle, provide the means of round cornering up to 125 sheets of ordinary paper at a single operation, and up to 50,000 corners per hour.

Use coupon page 48

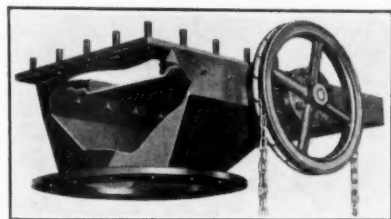


MACHINE CLAMP

No. 551

THIS NEW CLAMP for use with machine tools operates on the toggle principle. It minimizes set-up time, and will not slip after it is set. The working parts are hardened to protect against wear. It is furnished in various styles—with self-locking T-head for T-slots on machine tables; with flat base for jig and fixture clamping; and with various sizes of shanks to fit the holes in any type of planer or machine bed.

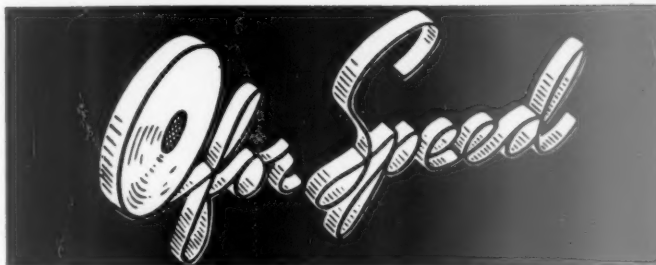
Use coupon page 48



HOPPER GATE

No. 552

TO CONTROL DELIVERY of lump or granular materials between the bottom of a hopper and the delivery spout, this improved gate has a slide, mounted on ball bearings and operated by means of a gear and chain wheel on the outside of the housing. The slide is of $\frac{9}{16}$ -inch cast iron, and is U-shaped, with protecting flanges to prevent material from the hopper from working to either side. In the full-open position, the slide is accommodated in an extension housing, and can be removed entirely without



● **Orange Core Sealing Tape** is made for action! Gummed with fast-gripping glue that has been specially processed, it sticks like a leech the minute it is applied. It will speed up production and get shipments off in double-quick time.

It seals tight as a drum and has the outstanding ability to bring your shipments through to a safe and sound arrival. All-around superiority and low cost have made it America's best-selling sealing tape. Write for FREE SAMPLE ROLL.

SHIPMENTS ARRIVE SAFE and SOUND



MOORE & THOMPSON PAPER CO., 220 E. 42nd ST., NEW YORK, N. Y.

We have the ANSWER to YOUR Question

WHENEVER you are faced with a tough cleaning problem, put it up to us. Tell us the product or surface to be cleaned, the foreign matter to be removed, the operations previous and subsequent to cleaning... and the chances are we already have the answer!

You can depend on our recommendations being practical. They are based on 29 years' successful experience helping other leading manufacturers do their cleaning better.

There's no obligation in writing us. Nor any expense involved if Oakite materials don't make good. You are the judge. Write.

OAKITE PRODUCTS, INC., 54 Thames St., New York
Branch Offices and Representatives in All
Principal Cities of the U. S.

OAKITE
Certified **CLEANING**

MATERIALS & METHODS FOR EVERY CLEANING REQUIREMENT

removing the gate. The wheel can be mounted on either side. The gate is made in four sizes, from 12 to 18 inches, and in designs for vertical or inclined mounting.

Use coupon page 48



**UNIT
HEATER**

No. 553

EMBODYING EFFICIENT HEATING design as in other models of this established line of unit heaters, the present unit features a housing of attractive appearance for use in stores, lobbies, and public rooms where the decorative element is a factor. Inlet and outlet steam pipes are brought in at the rear, and the fan and driving motor are both concealed. The housing is finished in black crackle lacquer, with satin chrome trim. The angular design of the louvres presents a modern appearance and also serves to spread the delivered air.

Use coupon page 48



Just try Barnes Blades! Tell us your cutting problem—let us suggest a blade to whip it economically.

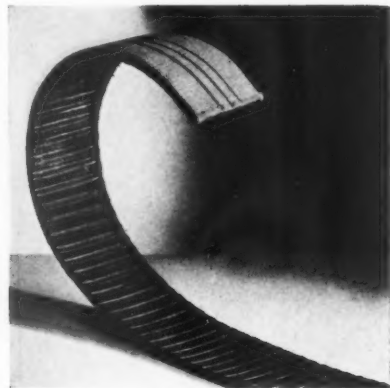
W. O. BARNES CO., INC. Detroit, Mich.

**Always at Your Service
ANTHRACITE
COKE
BITUMINOUS**

You will find this
a good house to do business with

**YATES-McLAUGHLIN, INC.
Rand Building Buffalo, N. Y.**

TRANSMISSION BELT



No. 554

THIS NEW TYPE transmission belting makes use of chrome leather reclaimed from belting previously in service, mounted on a fabric backing in cross-tread arrangement. The leather, which is free from stretch due to its earlier use, provides the traction between belt and pulley, while the fabric supplies tensional strength.

Use coupon page 48



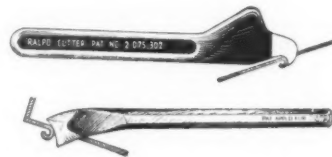
**SHREDDING
MACHINE**

No. 555

PLANT RUBBISH AND WASTE material can be reduced for burning or other disposal by means of this machine, which is available with two types of cylinders—one with shear blades to handle refuse containing nails or band iron, and the other with flat-faced knives for use on wood waste, paper stock, pulp, etc. It is of steel construction, and the main shaft is mounted on roller bearings. It can be furnished with a screen to control the degree of fineness, and there is a safety arrangement which throws out any large pieces of metal without injury to the cutter blades or the machine.

Use coupon page 48

SHEET METAL CUTTERS



No. 556

DESIGNED FOR CUTTING sheet metal, either in straight line or irregular outline, without the use of a backing surface, these tools cut a chip which curls out of the metal and leaves a clean edge on either side. The tool shown in the upper illustration is for general use, the hook shaped cutting point being advanced through the metal by striking the shoulder of the shank.

The tool shown below is a companion unit for reaching corners where the first tool cannot be used. The operation is similar leaving smooth edges and without bending down the sides.

Use coupon page 48

Association News

(Continued from page 35)

JANUARY 27

Syracuse—Dinner meeting of the Syracuse Association, at the Hotel Syracuse. Speaker: Dr. Neil Carothers, Dean of Business Administration, Lehigh University, "Where Are We, and Where Do We Go From Here?"

Seattle—Inspection visit by members of the Washington Association, to Daniel Bagley Hall, new chemistry building of the University of Washington.

Dallas—Meeting of the Dallas Association. Motion picture of the new Golden Gate Bridge at San Francisco, shown through courtesy of the Bethlehem Steel Co.

23rd Annual Convention
National Assn. of Purchasing Agents
St. Louis—May 23-26, 1938

Boffey Prize Paper

(Continued from page 45)

one of the Purchasing Department. In this survey inspection was performed as follows:

- By the Receiving Dept. in 15 Companies
- By the Inspection Dept. in 5 Companies
- By the Purchasing Dept. in 3 Companies
- By the Stores Dept. in 1 Company
- By no particular Dept. in 1 Company

Although it is important that the Purchasing Department knows that it is getting the goods it orders, it does not follow that inspection is a purchasing function. The Purchasing Department can get this information in other ways. In one plant, where inspection is a duty of the receiving department, the Purchasing Agent said, "If the goods are not up to standard, the Purchasing Department will soon hear it." This seems to be the general opinion of the Purchasing Agents interviewed. In-

spection, it is believed, can better be done by the receiving department at the plant, or better still, by a regular inspection department. They in turn can pass on the information to the Purchasing Department.

Traffic

Traffic is another function of the Purchasing Department in some instances. The U. S. Rubber Co. and the U. G. I. Co. place the control of Traffic under the Purchasing Director. Western Electric Co. has a Vice President in charge of Purchases and Traffic. By far the majority of the companies, however, do not consider traffic a purchasing function.

Stores

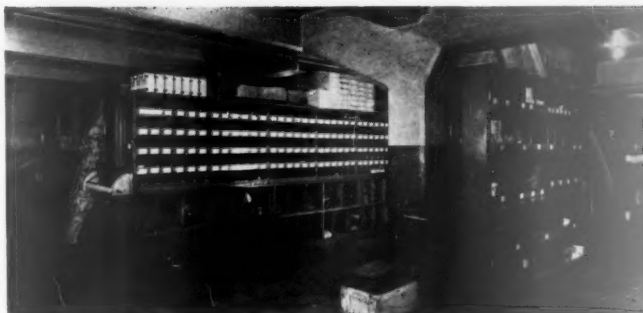
Stores was considered a function of purchasing by three of the companies interviewed. These two functions are extremely closely related but they should not be combined. They should operate side by side rather than one controlling the other. As one Purchasing Agent

said, their functions are different. The Purchasing Agent tends to load up in purchases, or to hold off, to suit the market. The Stores Department tries to keep the stocks at the most economical point. To secure the greatest efficiency close harmony is necessary between the two departments—and neither should dominate the other.

Consolidated Edison Company of New York has what seems to be one of the best arrangements. It has been found to work very satisfactorily. There is a Vice President who is in charge of Purchasing and Stores. Under him is the Director of Purchasing and the Director of Stores. These two departments are coordinated by a Stores Control Department. Before the Purchasing Department makes an unusual purchase it first gets the consent of the Control Department. By this method Stores and Purchasing are coordinated but neither dominates.

Salvage

One other function ascribed to the Purchasing Department is that of



"Easily Adjusted to Our Changing Needs"

Reports Mr. David Carlin, Supt. in Charge of Stores, INLAND STEEL CO., INDIANA HARBOR, IND.

● "Expansion of the Indiana Harbor mills have necessitated frequent changes of our original installation of Lyon Shelving. But, due to the flexibility of our Lyon equipment, these alterations have been made at little cost in time, labor or material. Our shelving requirements vary from storage of bolts and other heavy materials ... often representing tremendous loads per cubic foot of space ... to a special safety shoe department where convenience and accessibility are the primary considerations." Write for details on the exceptional efficiency and economy of Lyon Steel Shelving for all types of industrial storage.

LYON METAL PRODUCTS, INCORPORATED
3302 River Street Aurora, Illinois

LYON Service
STORAGE EQUIPMENT


LYON METAL PRODUCTS, INCORPORATED, Aurora, Illinois

*A little thing
to send for—but
such a Big thing
to have!*

IF your equipment
is not of welded
design, you'll be
amazed at what we
can do for you.
Write

S. MORGAN SMITH & CO.
YORK PENNA.



Look for the  Arm-and-Hammer

ARMSTRONG BROS.

Improved PIPE TOOLS

The most complete
line of Pipe Tools
made. Standard
types, each with
many improved de-
sign and construc-
tion features. Lighter, balanced
tools with drop-
forged, hardened
and alloy steel
parts wherever
they will add to
strength and tool life.



For tight places
—the Ratchet
Stock and 3-
wheel (Barnes
Type) Pipe Cut-
ter.

ARMSTRONG BROS. TOOL CO.
"The Tool Holder People"
303 N. Francisco Ave., CHICAGO, U.S.A.

Write for Catalog



Bituminous Coal

MINES: Scalp Level, South Fork, Hastings and La Rayne
Districts of Penna., and Fairmont District of
West Virginia.

SIZES: Lump — Egg — Nut — Pea — Stoker — Mine
Run—Especially Prepared Coal for Pulverizing.

CORTRIGHT COAL COMPANY

PENNA. BLDG.
PHILADELPHIA

ONE BROADWAY
NEW YORK

Salvage. This is a function which seems to be applied only in the larger companies. Where there is a great enough need for such a department the Purchasing Department seems to be the logical place for it. It knows the needs of the various plants so it can in many cases shift goods one plant doesn't need to a plant that can use them. If there is no need for them whatsoever, the Purchasing Department knows the market that there might be for these excess goods.

Duties of the Buyers

A second way that purchasing organizations can be classified is by the duties of the buyers. Buyers seem to be divided into three classes: those who buy one product or closely related products, those who buy unrelated products, and those who buy for certain plants or for a certain geographic division.

By Product

It is generally admitted that a person is more efficient if he specializes—and so a buyer should be more

efficient if he purchases one product or a group of related products. It was quite surprising to find so many cases of buyers purchasing overlapping and unrelated products. The most unspecialized buying occurs where the Purchasing Department just "grew up." Many companies realize this trouble but they believe that a change would do more harm than good. This of course is a problem for the individual company to solve. In some instances—often large well-organized companies—the buyers have several main items which they specialize in and seem to fill in their time purchasing other odd products. This is probably the best system if the miscellaneous purchases aren't important enough to demand a special buyer.

By District

Other companies divide their buyers by plants or districts. This practice occurs when the plants are widely scattered and when they produce different products. This system has the advantage of acquainting the buyers with the needs of the

particular plants. In many cases a combination of the two methods is used. Western Electric Co., although combining the two methods, seems to favor geographic division rather than product division (of buyers).

No one organization is perfect, nor will an organization that works satisfactorily for one company work for another company. A good organization doesn't just "grow" but is molded to suit the needs of the particular company.

Amount to be Purchased

The determination of the amount to be purchased depends largely on the policies of the company, i.e., how much responsibility is delegated to the Purchasing Department. In practice it varies from allowing the Purchasing Department to purchase only on requisition, to giving the Purchasing Agent charge of stores and letting him purchase whatever quantity he thinks best. In general the larger the company the more authority is given the Purchasing Department.